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Archived Digital Booklet of AI International Symposium

Department of English

The Department of English Language, Forman Christian College, is delighted to share the *Archived Digital Booklet* of the hosted *Artificial Intelligence (AI) International Symposium, themed Bridging Language, Literature, and Learning in the Digital Age*. This Digital Booklet can be accessed by scanning a QR code shared in our published write-up. We cautiously claim to be the first department of the Forman family to share archived word-to-word dictations of all Keynote presented speeches, which can be referenced and reviewed by students and faculty for their scholarly work and insights. Additionally, enclosed in these texts is an array of AI tools documented by international and national speakers; these scholars have also shared their pedagogical and scholarly experience with the selected tools. This reflective discourse could be an instrumental practice-sharing avenue. To generate the transcriptions for this Digital Booklet, AI agents, Screenapp, Speechnotes, and Grammarly, have been deployed, Though they are verbatim texts, there could be a few errors or information gaps for multiple reasons: proximity of the recording device, the inability of the AI agent to correctly comprehend the speaker's enunciation, time constraints for rigorous proofreading, and internet disruption. In the spirit of our symposium theme, we hope you would kindly overlook these inaccuracies.

At the end of each keynote transcription, the slide links are also provided for your review.

International Keynote

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Keynote Title: ***From Print to Pixel: Textuality and Meaning-Making in the AI Age***

Keywords: Digital technologies, Artificial intelligence, Multimedia, Algorithms, Interactive texts, Digital world, Virtual reality

Hello everyone, many thanks for having me. Many thanks, esteemed Rector, Deans, faculty, speakers, and students. It's my pleasure to be here today. My presentation is titled “From Print to Pixel Textuality and Meaning Making in the AI Age.” So, with the inception of digital media and communication technologies, literature has witnessed a watershed moment that is unprecedented in its long history of development. Although, it's always compared to the period after the invention of the printing press and its role in developing literature. The current significant moment of change is a huge jump into new aesthetics and politics that open up new spaces for literary scrutiny and scholarship. To explore the depths and the threats of the emerging digital literary forms associated with convocation and the Internet and their movement from a popular digital sphere into the niche. Most importantly, the mutating growth that the creative process agents are currently playing and the changing nature of critical evaluation principles are developing since it's the turn of the Millennium. At a pace that conventional literary criticism has been challenged to keep up with.This presentation intends to trace the development of the pillars of the creative process: the text, the author, and the reader, in their journey from literacy into digitality to conceptualize and define their new roles and writings in Literature and Meaning-making. The main aim is to offer a framework for mapping and analyzing literature developments and meaning-making in the 21st century. With a special focus on artificial intelligence-based transformations, I will start with digital textuality and its development in the contemporary digital age.

Textuality and its journey through writing the technologies from Papyrus Rome, to the manuscript, to the printed book, to the electronic book has experienced huge mutations and

changes. Enable devices are writing and reading spaces provided by each age's technology. The interactive and autonomous dynamics of the electronic writing space, as provided or proposed by Walter, create new textual environments where web pages and multimedia applications can act as well as React, redefining themselves in ways That neither the author nor the leader can necessarily predict in advance.

Here, I will try to map digital textuality. We will find that its development parallels the development of digital media and tools from hybrid text to social media to artificial intelligence. The most significant portion of digital textuality falls in the area of hypertextuality, where the first generation of digital authors has made use of their capabilities of hypertext technology to write nonlinear artifacts. There are abundant examples under this category, ranging from early experimental works such as “Afternoon Asturi" in 1987 by Michael Joyce and “The Victory Garden” in 1991 by Stuart Moulthrop. Two later hypertext novels “Patchwork Girl" in 1995 by Shelly Jackson and “The Grammar Zoo” in 1997 by Janik Coat

Hypertextuality poetry examples include; “The Ballad of Sand and the Harry Soot” in 1999 by Stephanie Strickland and “The Carving Impossibilities" in 2001 by Dena Larsen. These workers exploit hyperlink structures to challenge traditional narrative linearity, offering readers a participatory role in shaping the progression of the text. They use platforms like “Story Space,” “Twine,” and “And Scalar,” enabling new modes of digital authorship. With the development of digital media and the ubiquity of social media platforms, A particular generation of digital authors has appeared to leverage the peculiar capabilities of these platforms in democratizing the creative process by writing collaborative and interactive texts. Examples of social media literature are YouTube and Vimeo poetry, such as “The Dice Player” by Mahmoud Darwish in 2013. There are various examples which were short, visually stylized poems accompanying minimalist or hand-drawn illustrations, creating an intimate and desirable reading experience. The Facebook narrative includes the “Only 1mm Away” novel by Abdelouahid Stitou and the Twitter literature or “Twitterature”.

I think the generation of digital writers has appeared with a contemporary advancement and the spread of artificial intelligence technology, starting with generative poetry and augmented reality narrative, such as the “Al-Barrah” novel by Mohamed A. Nasef and myself. It can be noticed that Digital textuality is currently everywhere, and its constant development is related to the rapid advancements in digital and communication technologies.

Textuality has passed through several paradigm shifts, and it's a journey from print into digital contexts. The first paradigm shift is a transformation from literariness into E-Literalness, and here I want to read this quote; “One needs to be aware that meaning is, in the face of E- literature, an outcome of several components. Engaged in digital text-making and not just as a verbal component, meaning is also conveyed. By silence, blinds, vanishing, crossed out, and eligible letters. However, situations and interruptions in the trainers presuppose compression and the replacement of linear forms of expression. Narrative discourse, with the nonlinear shortened and economical.” E-literalness should be found in

between the insecure and the intersection of letters and words. HTML characters, words, images, textual and nontextual signifiers, vanishing and self-destructing signifiers, and the algorithms on the one hand and on the basic components of algorithmic digital, Practical software, and interface culture on the other hand. E- literalness is also generated where there are bodily interactions with the textual as well as gestures. Rotate, zoom out, click and drag, drag and drop, drag, touch, hold, ping, click and tap. So this is the context of E-literariness.

For example, 'Al-Barrah' is a name in Arabic that means "the announcer." This is an augmented reality project that includes. A paper-based narrative, a Linguistic narrative in Arabic, and some photos like this. You will get this by downloading an augmented reality application on your smartphone and scanning these photos. Digital content is that complement is a linguistic narration on paper. So, Al-Barrah's novel's plot is divided between paper and digital content. A scene in this novel is narrated via Sounds without Words. Because. This project provides a cultural and socio-political critique, which is a sensitive and critical subject to be discussed openly in the context of the Middle East. So, AI here provides a tool to provide our narration. In one of the scenes, where the female character is raped inside one of the prisons in one of the countries in the Arab world, the narration is provided through the sounds of keys, footsteps, water, cries, and shouts. The reader will create a narration in their imagination by using these sounds. So, this is based on the capabilities and potentials of AI.

So, E-literacy provides new tools for execution and creates new spaces for creativity. The process of meaning-making transformed from making sense of the text at hand into a collective negotiation of meaning. Readers and authors negotiate meaning, which is considered a challenge to the author's intentionality and modern literary theory, depriving the text of any additional meanings other than the one intended by the original author. The author's central authority is designing the grammar of interaction to serve the message they want to convey. By dismissing the meaning-making value as the aim of the interpretation process, we propose that interaction in the postmodern age is about suggesting, playing with ideas, reflecting, and sharing results and the feelings triggered by interaction with the artwork. These transformations in digital textuality lead to evangelizing the text.

According to Catherine Hayes, the timbrel aspect of digital writing is brought by the digital affordances that help the text to be conceived as a machine to organize time; special aspects are divided among data files and commands, software that executes the commands, and the hardware on which the software runs. The digital texts' peculiar digital aesthetics, enabled by their spatial materialization, transform the tests from an object into an event. Namely, it is to be more of an event and less of a discreet, self-contained object with clear boundaries in space and time. I will proceed to reflect on the second pillar of the creative process, the created process, Authorship.

Disputes on the authority of authorship have peaked with the application of artificial intelligence potentials and pivotal writing. In the following slides, we will discuss several examples that embody this dispute. The first example is literary text generators, where computers create linguistic permutations based on databases of linguistic units and programmed algorithms. For instance, this is the first text or poem by Christopher Strachey in 1952, and this poem was generated by software called “Love Letter Generator” at the University of Manchester, actually, it was a poem written by the computer. It was one of the results of testing the capabilities of the first generative computer invented at the time, named Manchester Mark 1, and here is the poem. We can find the signature “M.U.C” in reference to the Manchester University computer, so the signature here refers to the computer that produced the text. In this case, three authors dispute. Namely three agents who claim to be fighting each other. We have the programmer who codes the software program, the writer who feeds the program with the configured linguistic database, and the computer who executes the whole process and uses the literary text. In the text at hand, as I clarified. This signature refers to the computer, but we still ask who the user is. Is it the computer or the programmer who created the software? Or the original author, who fed the computer and the programmer with the variables to start making the mutations?
Other works are signed by creative writers, such as the Iraqi poet Nabeel Yasin, who puts his name on the cover of the paper-based poetry book. He collaborated with two Iraqi programmers who created the Wisdom Machine, which started creating poetry based on the variables provided by Nabeel Yasin. He put his name on the cover when the poet printed this poetry in a paper book. So the human writer here claims authorship, “I am the author”. In the previous example it was MUC, here is a human author.

An additional agent could be added to the list of disputes on the authorship position, as is the case with Simon Biggs's “Great Wall of China” in 1996. Where the linguistic database is borrowed from a previous literary world. It's Kafka’s “The Great Wall of China” 1931. To qualify Kafka as one of the authors of the newly generated literary work is a complicated scene of authorship. An example that embodies dispute on authorship is collaborative writing, which is developed by Input provided by both the creative writer and the participating readers. The individual act of writing has transformed into a collaborative act of developing text. That can be considered a result of collective creativity. Pushing the boundaries of the literary creative process from singularity to collectively is enabled by the digital media potentials

of affordability, interactivity mediacy, and accessibility, which have exercised their effects not only on the literary creative process but also on Socio-political sphere as manifested in the collective actions that led to the Arbor Spring, the mass revolutions across most countries of the Arab world.

We have 2.0 fiction or social media fiction, an example that clarifies the dispute of authorship, such as this Facebook novel, “Only 1mm Away,” launched in 2013. The adopted technique of writing in this novel was posting a chapter every two days on the novel's Facebook page. By the original author and opening the space for the page’s followers or readers to suggest changes or amendments to the series of incidents and the characters' fates. The collective creativity that shaped this novel raises the question, who is the author here? The wide application of AI capabilities in creative writing has opened further spaces for readers to participate in developing creative work and claim their rights to authorship. Augmented reality fiction is an example here. Al-Barrah, for example, uses narration on paper to direct the reader via the augmented reality application to the novel's website. When the reader is asked to compliment one of the subplots, share their photos, write up a word, or sing a song, as we can read here, these are questions and instructions to the reader. If you have a particular photo for your class, special events, or whatever, you can upload your photo here. You can inspire a poem from the novel scene and upload your poem. You can draw a painting, taking this chapter as your inspiration. So, we are extending the space of narration to readers. Not to be just one author, but we are helping our readers to be co-authors with us and extending the writing space for more authors.

So, all these transformations of authorship in the digital literary sphere have affected the conventional authority of authorship and distributed it among various human and non-human agents. I will now discuss the last pillar of the literary connected process: reading. The interest in receiving the literary text and its effect on the audience of readers dates back to the Andalusian philosopher, whose translation and editing of Aristotle's Politics was augmented by its impact on readers and the audience's contextual structure. We can see and trace these origins and the effect of the literary world on the audience and readers in many works. So, in the conventional reading process, the reader has a preconception of what reading a book entails. There is no need to direct the reader how or where to read. The reader must first explore how the work functions in reading new media works. Instructions on how to read and interact with the work are provided as a first encounter with the work. You will notice this if you visit the Four Collections of Electronic Literature and the Electronic Literature Organization, the first international electronic literature organization founded in 1999. This organization has issues with volumes of digital or electronic literature. If you visit these volumes, you will find that the instructions on interacting and reading the word are provided as a first interface with a work.

Also, I will go back to the Al-Barrah project, where the first page sets up what Simon called “the grammar of interaction,” as we can see here. These

are the instructions we give to readers. This is written in Arabic and says, “To know the compatible versions of your digital device which is compatible with this application. Go to this website.” To learn how to create the plastic pyramid, go to this website. As, this project also includes holograms, we are asking the readers to develop a plastic pyramid and what this pyramid is about digital content, for this digital content to be reflected in the size of pyramids, making 3D shapes and these shapes and this atmosphere, this aura that I collected on the day before yesterday. This aura of literature. All these things help the reader to be immersed in the literary way, so. And if you have any questions, you can go to this website. So these are the instructions given to the reader and the first page of Al-Barrah. This is like a map of what to do when reading this project. You should download the application, bring the paper book, scan photos, and start reading.

There are two levels of reading when reading new media artifacts. The first reading is conducted by the computer, which reads the code behind the screen and translates it into Images, sounds, graphics, and verbal text that appear on the screen in peculiar aesthetics that facilitate a specific intervention by the human reader. The human reader or the interactor conducts the second reading. Who could be a usual reader or a critic and engage in the process of experiencing the presented text or event constrained by its unique materiality? So, the gradual transformation of the reader's role to be a writer or a co-author is aligned with the emergent digital technology phase literally at the artistic manifestation, which started with hypertextual writing and moved to collaborative writing and interactive installations. Fan fiction is believed to be a significant example of the transformation of the reader to a co-author by rewriting, complimenting, or reimagining the literary texts. “The Second Magic War” is one of many texts that reimagine or rewrite several incidents of the well-known fantasy series “Harry Potter.” Interactivity is one of the prominent features of reading in the digital age. Reading a literary text is commonly perceived as exploring the meaning or the message conveyed through the text at hand. Conventional literature highlights the reader's cognitive engagement with the literary work to perceive its meaning and symbolism. This kind of engagement has been expanded to include physical engagement with interactive digital works that require the interactor's input to unfold their meanings. Interactivity is not merely the ability to navigate the virtual world. It is the power of the user to modify this environment. This is the plastic pyramid used for hologram technology, and it's an example of the physical engagement with the literary work. So, the reader here physically interacts with the work by creating this plastic pyramid, which is used in projecting a hologram video inside it, dedicated to several incidents that complimented the paper-based narrative. The mutation of the position of the reader to be an author encouraged theorists to declare the death of the reader instead of the death of the author, as proposed by post-structuralists and postmodernists. Supported by French literary critic Roland Barthes in the circumstance and others such as Michelle Foucault.

We are moving from the author into the resurgence of the author. So we are coming to the start of the game, from focusing on the author, the text, and the reader, going back to focusing on the author, and this accounts for the recent interest in scholarship like authorship attribution because the main question now is, Who is the author? Because many of us now are authors using

generative AI, all of us are authors. So, from the author's death to the author's resurgence. With the development of smartphones and handheld computers, augmented reading has become a peculiar feature of reading, and it's mingling with artificial intelligence technology and, specifically, augmented reality technology. Augmented reality is a technology that adds an extra visual layer to the world, as seen through the history of a handheld computer or smartphone. The surroundings may thus be visually augmented to include objects and forms. Colors that are not there but appear to be there when the surroundings are viewed through the telephone's display. For example, the project is a photo printed in a paper book, and we are using the augmented reality application on our smartphone. We are scanning the image like this, and you can notice that this is digital content as if we are transforming the aesthetic photos into dynamic content like this.

So, as I have clarified, several images in the paper-based novel are augmented or enhanced with added digital content that can be accessed through the augmented reality application. Download it on your smartphone and the picture here, as I can verify it. The vision of content here extends narration. We are opening up new spaces for narration, not to be constrained to paper-based narration but to expand the digital space of narration. We also have another kind of reading, which is immersive. Reading which AI enables. The term immersion is a technological term that was transferred into the literary sphere by literary series such as Mary Lorraine. The figural meaning of immersion can be traced back to conventional literary works by print writers such as Joseph Conrad, who said in 1897 in one of his novels, “My task which I'm trying to achieve is by the power of the written words. To make you hear, To make you feel. It's before all, To make you see.” This is a conceptual emergence, but with AI emergence becoming a material and sensorial act, reading has become an immersive experience. The reader feels, hears, and sees objects in the surrounding environment that are not physically there to blur the boundary between fiction and reality. And that's what we are experiencing now. To plot the boundaries between fiction and reality.

Also, I go back to Al-Barrah. Narration on paper is interrupted at a certain point by a call the reader receives on their phone from the novel's protagonist. This illusion of immediacy and immersion blurs the frontiers between the novel's fictional world and the surrounding physical reality of the reader. You will scan this photo using your augmented reality application on your phone. By scanning this photo, you will get a call from the novel's protagonist to deliver a message; the protagonist will speak to you. At the same time, while you are reading, the point here is that we want to provide this meaning of immediacy to create a state of confusion. Is it fiction? Is it reality or imagination? We want to convey this by Immersive reading, to be immersed in the narrative world.

I will conclude with this quotation that reflects on the future of the creative process. “The next big leap forward will be in innovation that inserts us deeper into our interface with technology once the interface becomes entirely transparent. The gap between fiction and reality will have the potential to become fully permeable”. Finally, we can say that the text, the author, the reader, and the Artificial Intelligence interact in a transparent loop, where they exchange grounds with each other and with other human and non-human agents in any and outside environment.

Hosny,R.*Al-Barrah: https://albarrahnovel.com/*

Slide Link:
https://docs.google.com/presentation/d/1qNhrkfHvNzwyzICEZGW3mbNGNizuWgvP/edit?usp=drive_link&ouid=114820326913843702946&rtpof=true&sd=true

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Keynote Title: ***Transforming Language, Literature, and Learning in the Digital Era***

Keywords: Artificial Intelligence in Humanities, Language Technology, Digital Learning Innovations, Ethics in AI Integration.

I'm teaching Research Method Academy 19, cycling, music... and all the other subjects to both postgraduates and undergraduates in University of Utara, Malaysia. My research expertise area is. Specific purpose corpus linguistics, which I am proud to share today. Right genre and discourse and this is computer assisted corpus analysis. That I developed during my PhD journey, my PhD study and within that CACA approach. Actually, at present I have about 18 successful PhD scholars who have already completed using this model. And also, at present I'm supervising about 23. I hold the package for the CACA approach and I'm also keen on developing further professional and academic purposes for research, actively motivating scholars and especially teachers right in contacting classroom-based investigation using the approach to enhance classroom teaching and. How can we align AI get into our teaching practices right? Basically, this is one new approach that one of my students suggested. OK, the data-driven learning using a purpose. So, what is data-driven learning and recovering that OK? What is corpus linguistics? OK, how can DDL be used to teach language? What are some of the resources and tools that can be used in the classroom? What are some of the teaching ideas that teachers can apply and the references? First of all, let's try to understand what is data-driven Learning or DDL for short. OK, It is the use of the tools and techniques of corporate linguistics, basically being assisted by Artificial Intelligence AI.

For second language learning or you as mentioned by Bolton and Forth in 2017, right...? It gives direct access to the data so that the development can build their own profiles of meanings and uses. OK, these are all the definitions given by scholars, right? Every student is a Sherlock Holmes, right, I've seen Sherlock Holmes posted down there just now and here in my classroom. Usually if I'm teaching, I make sure all the students are kind of Sherlock Holmes so that they can use AI and corpus interactively. Right. So, AI and then you see team in this digital era, OK, the intersection of AI and

the humanities has created fun. Abilities of language learning literature and learning with advanced translation tools to revolve, I always have problems saying this. Educated to adapting learning technologies, I think this is the speech act I need. In literature, AI emerges as both an analytical and creative force, enabling language scale, cultural analysis and partnering with human creators in generating artistic content. In education, AI powered systems offer personalized learning experiences and enhanced accessibility. And how knowledge is delivered and received. OK, so this brings to my area of expertise. What is corpus linguistics and how can we engage it with AI right? Is corpus English a new theory of language? Well, the answer is no. OK, in principle, any theory of language learning is compatible with a corpus-based research. OK, please, they are sorry. We will see a separate brand from linguistics, syntax, semantics, and grammar. Practical. No, in most aspects of language can be studied using a corpus approach. OK, A methodology to study language in all aspects, yes OK Corpus you think is the most important principle in that you know where you can actually learn or understand many aspects of language. Real life language use uses AI to encourage students to have real-life practice where you know there are interviews conducted so AI can access that term, right? They facilitated by the advent of computer technology, right? Letting the definition given by inletting corpus means just a body of. It can be like a compilation of a literary text and used to give your... personal interpretation to it. OK, how to actually use this literary text in the classroom? Right so creating and investigating to understand the underlying structural constructs of the written text this has been reduced by machinery OK this is quite interesting if such factor it was considered impossible to process that of several million words in length. It is huge big data machine learning. Right 20 years ago it was considered marginally possible right. It was considered quite possible ten years ago, but it was still lunatic, right? Teachers were feeling like 400... But today it has become very popular, OK, among researchers, alright, how can DDL be used to teach a language?

But first of all, we need to identify what is the purpose of creating a corpus, OK? I will share with you later how you can integrate AI. For teaching a second language or a foreign language narrative, it can be digital narratives. Some of my students actually looked at journalism right. Those articles that has been already published in online platforms and they will create corpus of corpora from those tax and then analyze it. It's very nice as well. You can make them into for example, there was one student from Nigeria, I think he analyzed the word power. How is power represented in the particular novel? OK, using a corpus, right? So, you also need to pay attention to the level of learners that you are actually engaging with, right? Provide them with the authentic data in the in the means of the for example just online newspaper. Because the literary tags the narratives when you interview, you know, humans. For example, as recently as student of mine, she actually compiled a narrative from a human from a senior. I think those were criticized and so on. And actually, her PhD thesis has been nominated as a best thesis of... So that is what I'm trying to say, is that is provided authentic data to the learners so that they are familiar with what is needed. OK. Representativeness of the tax in the corpus is also important. For example, for my PhD, I actually compiled the tax from the industry, the oil and gas, the work procedures. Written by engineers. So those are authentic text, meaning you are bringing the authentic texts into the classroom. You are bridging the gap OK between the real-world requirement from these learners and what we teachers are doing in the classroom. OK, so this is a model run was developed to analyze attacks. OK, it is an uncomplicated method of corpus compilation and computer assisted and PCs. OK, this is where we use a lot of AI, actually write soft copy software and so on. OK, it is useful to highlight the linguistic patterns in sentence written. Multiple potentialities of data include manual tagging of we are not giving everything to AI, so we do not need to fear that

you know, the computer might do mistake and so on. Actually, humans will do mistakes. Alright, there's a human error part, but if you're using AI and computer, you can rest assured you will have 97% of accuracy, OK, right. So. It includes automated parts of speech tagging using some software, frequency analysis, analyzing the distribution patterns of selected words or part of speech, etc. This is one example which we are doing right and we have been doing this OK or the compilation part of speech tagging and then linguistic. The frequency or the syntactical order of the words in the text. OK distribution factors. This is the CACA model, right? It has been used by many students. OK, all the five steps there, right, so. OK, what are some of the resources and tools we can use to bridge this tool? OK, AI and purpose linguistics, right? You can actually use text like, you know, cross, cross tagger cross.

I am not sure whether you have heard about cross Dagger 578... and new ones are coming always and formed by Anthony Lawrence from Waseda University in Japan. He has actually developed this and from software is freely available. It is AI assisted. It helps you to analyze the frequency of the parts of speech being used. Why is it important? So that teachers will know how the students are using. Verbs past tense, present tense, and so on. OK if you have actually detected. Overuse of certain words you can get the help of encompass and see why the pattern is such why the students are using, you know, overly using such terms, right designation of the frequency OK distribution analysis of the most frequently used part of speech and so on and the sum of messages are using the new ones that. Which has been created by. You know, I'm not sure which one. They are. That's horizontal and vertical. This is the proposed syntactical level of analysis. This is the fact before being the tax before that, right? And this is after tagging, OK, So all these codes, we are not the one that putting in, it's being helped by AI, right? There's already been tag list there, so we can use it to understand the written text. OK, so some of the teaching ideas right here, actually I'm sharing. You can always have predicting lesson plans, asking the student to predict how to use certain words and so on. That's why I call them Sherlock Holmes of the present days, OK? Observing, noticing, thinking, reasoning, analyzing, interpreting, reflecting, and so on. Right, with the use of AIA corpus even states, So what I've done what I'm teaching ideas here, the indirect use of opera in teaching reference publishing, materials development and language says these are the areas where you can focus on OK, the directives of corpora teaching, teaching about something. Something or exploiting something to teach right? Further teaching oriented. Alright so suggested activities which can be used in together in selected words meaning provocation. OK, let's say home. Home is used with what? OK, come back home or something going home right? How do they align right frequency of selected words, the part of which has been tagged so you can understand? Maybe the students like to use the actually. We found in argumentative basis right Some of our research in the in the UN... OK Understanding how certain words are used in the text. The distribution patterns of the text. Creating word list Creating word list is very important when you are creating dictionaries. OK, basically all the dictionaries OK yeah all I would say 100% are developed using corpus-based approach. Alright, this is one example for a small-scale study that we have carried out in Qatar, Malaysia, one of the state Malaysia. 181718 years old... They got so perceived sampling

method. They have right. In English it's mixed gender, right? 7 males and 9 females. The poor. Question lasting for one hour.

This is why the students were guided to be Sherlock Holmes. They investigate the text themselves. They identify the pattern, the distribution patterns themselves. It was found to be very effective. OK, so these were the aims, the objectives of the study, right? So that the students by the end of. Understanding of purpose-based language analysis will have the ability to work with confidence, software, meaning and form clause and so on. Identify ways of using corpora in the language classroom, the production of teaching materials with corpora and confidence and also the integration of these materials in future teaching. We help us to align some of the teaching materials which we developed using AI, OK. So, these are the these were related, these functions given to the students. So, you can have very specific learning instructions and let the students do the work by themselves, right with the support of a corpus. Right. So after, after conducting that intervention, we had actually interviewed, we, we interviewed the students to find out the effectiveness of that particular intervention, right. And this weather and it seems that we have a lot dark right for the use of common noun, singular common noun and article general preposition general. These five POS or five rupees... were found to be, you know, most of the time the student tend to use these right... And the analysis of the distribution of patterns, OK, you have this provided by the end form software, OK, if we are going to do this manually, I think it's quite impossible, OK, so AI assist us. Correct pastor and this is all words. What words come comes after that selected word, right? How can you use it to make a cluster or phrases? OK, we teach students how to use phrases. This will assist us in that. Yeah, these kinds of activities. So, the finding and conclusion I think qualitative design is. Reflection showed that the students were enjoying the use of DDL in the classroom. They were enjoying it. Most of the students agreed that DDL gave them an opportunity to be a language scientist. OK and analyze the use of the selectable using the corpus analysis approach. So, students also agree that they need more practice to be able to use such learning approach. OK. It was found that using the method of assessing and evaluating students writing may lead to better understanding of students' knowledge of the writing conventions. In the into any present analysis for any compiled representative corpus. Why I said compile representative purpose. You can compile any purpose. It can be representative of a particular literary text if you want alright journalism articles, online articles and so on. And some of my students actually even compile certain verses from Al Quran and Justice. See why there's a need of a white space between words. OK, what is the function of those white spaces? So, these were the references that I used. Alright. And some of the examples corpus that you can find around the world British National Corpus and all this purpose actually can be applied with any AI tool to assist your analysis.

SlideLink:
https://docs.google.com/presentation/d/1Ky9lhSutxVGY3S0dmF66gK1gdZpchkrn/edit?usp=drive_link&ouid=114820326913843702946&rtpof=true&sd=true

National Keynotes

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Keynote Title: *'A Human-AI Synergy in the Humanities'*

Thank you very much; this is my first time at FCCU; you have a very beautiful campus.

We all know, my topic today is AI. But we have not come to any solution yet. We're just discussing and generating ideas. I have some points with me, and then we can have more presentations and maybe come to a conclusion. But after reading all this and working on it for the past year, I haven't come to any solution. But I have my arguments on that, so let's discuss that.

AI has become an integral part of digital humanities, it introduces opportunities and challenges in research, pedagogy, and creative production. Its role in enhancing literary criticism, fostering interdisciplinary research, and reimagining traditional narrative structures signals profound shifts in the study and creation of literature. However, the rise of AI-generated content, including fiction, poetry, and plays, raises ethical concerns around authorship, intellectual property, and the authenticity of machine-generated literature. While AI can enhance greater possibilities, it challenges traditional notions of authorship and originality in ways that may fundamentally alter literary practices. Its potential to democratize literature by facilitating multilingual and cross-cultural exchange may simultaneously obscure the unique cultural contexts of literary works, leading to a loss of nuances in translation and analysis. So today, I will present how AI can augment human creativity and improve research efficiency and educational access when used as a complementary tool. I will explore if human-AI collaboration offers a path forward that preserves the critical, cultural, and ethical dimensions historically defining the humanities, fostering a deeper, more inclusive approach to literary scholarship and creation.

Now, is AI just another technological invention or will it change the rules of the game? How are humans able to generate information, knowledge, even wisdom we never experienced before?

Now, new technologies equal new perceptions, new practices and new understandings. This was true of the discovery of fire and the discovery of the wheel. It was true of Newtonian mechanics, which views the world as a machine, and System Theory, which views everything as a network. And it will be true of AI too. In 1959, this foreign novelist, C.P. Snow wrote that throughout modern times, academia separated knowledge in two major domains. On the one hand, there is science, which includes physics, chemistry, biology, mathematics and engineering, where the main interest is in exploring natural laws and applying them to real life problems. On the other hand, there are humanities including disciplines such as

philosophy, history, linguistics, literature, politics, sociology and psychology, where the main goal is to interpret the world and attain a deep understanding of our history and cultural activities. So, if you look more closely at these two cultures, you will find they essentially represent two forms of rationality. Science represents a more instrumental, quantitative way of looking at the world, involving casual links, field studies, data, and experimental interventions that attempt to explore it and explain it. The Humanities, meanwhile, are qualitative and language-based and provide a more historical and context-specific view seeking to understand the world better. Now, explanation and understanding are separate but they are interdependent and mutually complementary. Each culture requires the output of the other. Science needs critical value based narratives of the Humanities and the Humanities need Scientific findings about nature, laws, and phenomenon. So, the wisdom of these two cultures is important because when they are separate from each other, they offer little to no understanding of literature. A meeting between the two cultures would mark the beginning of a very productive and creative life in human history. They live in different galaxies. At the same time, two cultures disassociate their knowledge from reality, producing masses of statistically significant, yet also often irrelevant findings and studies. The obtained information becomes further disconnected from knowledge in other disciplines. Any further cognitive specialization means we risk losing our understanding of the whole. For around three decades, we have been witnessing the emergence of a new discipline that has the potential not just to build on the two cultures that is Science and Humanities and their intrinsic forms of rationality, but to transcend them.

It could act as a new general thing that figures a scientific revolution, enabling humankind to shift our collective consciousness, attain even greater knowledge, and better understand the world and ourselves. Knowledge, information and understanding unlike anything we have previously experienced in the evolution of humanity. Now, this development began on the 12th March 1989 with the invention of the World Wide Web, which would go on to revolutionize our communication. The World Wide Web created a multidirectional network effect in communication. So AI, deep learning, big data, correlations, and social media are spin-offs of that foundational invention. It's in the process of digitization. The world comes to be seen in terms of zeros and ones, with correlations rather than causal links being key. Consequently, the boundaries between the biological and physical world around us, the economic and social spheres, psychological qualities, and cultural practices on the one hand, and the digital world on the other will lead either to dissociation or further integration. If these new technologies are implemented in the right way, taking account of all side effects and spillovers, AI and deep learning will integrate our knowledge rather than dissociating or fragmenting it, and this new general technology would be more like Prometheus, providing us with new tools rather than a Pandora box doing more harm than good.
So, let's take some examples that I've collected from the Internet. For example, AI-supported E-governance would allow for better traffic laws. Improvements in Cyber Attack Prevention, Finance and Identify Fraud and illicit transactions through AI. The 3D protein folding would allow for the discovery of new antibiotics. You can access databases for text and literature in dozens of languages that would require 500 years of reading time. So rather than the manual translation from a small handful of people who can read and it takes hundreds of years. AI can provide a tool to enhance and accelerate that process. But how?

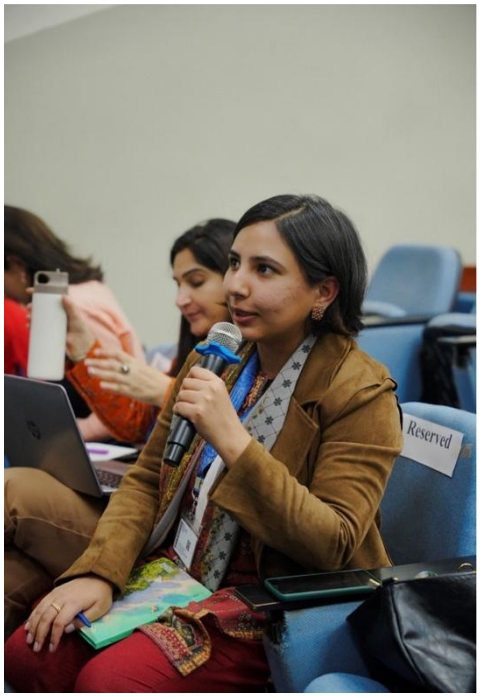
Those processes are still under discussion. So, all these applications, findings or consequences and potentialities are still incomplete. They're leading to a deep understanding of the world within and around us. We could never achieve assistance solely by pencils or Petri dishes. The new technologies are shedding light on the part of our reality we did not even know existed in the 1st place, allowing us to draw rational conclusions we never thought we would be able to. But each time we introduce IT coding into traditional ways of thinking, we not only double the world in a digital form, but add that was not there before, simultaneously making the world more measurable and more meaningful. This additional information and knowledge feeds back into Science and Humanities, but also transforms the world as a whole. More metric simply means more quantifiable parameters, more scoring, ranking, and evaluating each other. These metrics serve not merely to mirror the world, but potentially to manipulate, augment, and ultimately to generate completely new measures and meanings, new ideas and concepts, over and over again. In part stimulating this new technology stimulates a human brain, but it's not itself a brain, just as mechanical diggers or hammers stimulate human muscle power, but are not human muscles. This new culture eventually shifts our consciousness, our society, and the world as a whole from a primary of two, incommensurable cultures toward the trinary with a third culture that will eventually integrate and enlarge the knowledge of the two. In this sense, digitalization adds 1/3 dimension to explaining and understanding our world and ourselves.

There are 4 aspects that differentiate this new scientific revolution from earlier ones, such as the telescope, the printing press, and the steam engine. We can call them ‘differentia specifica of AI’ and data application. The first identification allowed us to digitally multiply the world. For the first time in human history, we can literally generate a parallel wall that is able to influence, enhance and nudge our analog warps. Second, big data correlation provides scientific evidence of the interconnectedness and interdependence of everything, thereby supporting narratives of the world as a web. So that is a fundamental code of the third culture and the new upcoming scientific revolution.

The Renaissance of the 15th century was characterized by the critical Greek and Arabic tradition. The second human-centered Renaissance we are witnessing now will not be a repeat of the 1st but will rather seek to integrate our fractured knowledge and wisdom about the world and contribute to a larger, more holistic consciousness. These advances in the traditional two cultures will further look back into society, doubling the wealth in digital form and eventually deepening and expanding our individual and collective consciousness to see more and do much better. Research and development are destined to become truly transdisciplinary, paving the way for a form of integrated knowledge that we could call one science. So as long as we are operating with two cultures, we will remain with this dichotomy between understanding and explanation, between words and data. So in order to overcome that dichotomy, we have to introduce a third culture, one that is literally doubling, self improving, and demonstrating the foundational correlations of the interconnectedness. Of all

things that would be used as such, not to replace but to integrate the Humanities and Science through digitalization.

Now AI-powered literary analysis that we're experiencing now in our literary classrooms, AI tools like sentiment analysis, styles, authorship, and attribution can be applied specifically to works, for example, Shakespeare's “Hamlet.” We can use area-driven sentiment analysis to trace the emotional aspects of Hamlet's soliloquies. This analysis can highlight how I can map up the complexity of character development or the underlying emotional currents that might be missed in traditional close readings. I argue that AI provides a data-driven lens to uncover recurring patterns in language, offering a fresh way to explore thematic depth.
Then AI-driven multilingual literature and cross-cultural exchange, AI-driven translation tools like Google Translate or DeeAI or many other tools can be used to facilitate cross-cultural exchange. But how are they? They may fail to capture the subtleties of language and cultural nuances. We can compare translations of classical texts like the Odyssey by Homer. AI tools can quickly translate large portions of the text into multiple languages, but a deep analysis could show how some nuances, such as the cultural importance of the Greek gods or the concepts of glory in the original Greek are lost or misrepresented. AI's ability to bridge linguistic gaps does not necessarily mean it is preserving the deep cultural or historical meaning that shapes literary text value. So, the scholars must be visited to maintain the cultural integrity of work during the transition process.



Now, AI in Creative Literature: Expanding Narrative Forms. AI is expanding the narrative, possibly creative, form of writing in the storylines, characters, and structures. It is debatable whether that's a creation or that's a generation. A short story generated by an AI like ChatGPT in the style of Franz Kafka's "The Metamorphosis”. AI might produce a narrative that features severe transformations in absurd situations. While those factors might resemble Kafka’s emotional, and psychological depth of the protagonist, alienation could be lacking. Kafka's work is deeply tied to existential questions and the socio-political context of his time, which AI might miss entirely. So AI can replicate narrative forms and styles, but it struggles to integrate the layers of political subtext that define human created literature. This also suggests that exceptional literature lies in augmented creativity rather than replacement, where human authors can use AI as a tool for experimentation while preserving their own creative agents.

AI enhanced teaching and literary AI tools like Grammarly, automated essay graders or AI driven personalized learning platforms are being used in literature education. For example, consider how an AI driven tool like Turnitin, used for plagiarism detection or primarily for grammar style corrections, interacts with Jane Austen's “Pride and Prejudice”. While AI can provide immediate feedback of language use, such tools risk reducing complexity analysis to surface level concerns, missing the deeper discussions about themes like marriage, class, and social expectations that Austin explores. So, while it can enhance the learning scenes by offering personalized feedback, they may unintentionally diminish critical engagement with the deeper meanings of the text. It also depends upon how prompts are given to AI.

Since I have been reading “Nexus”, the newly published book, I integrated those readings into my research. The exploration of the evolution of information networks in “Nexus: A Brief History of Information Networks from the Stone Age to AI” by Yuval Noah Harari can weaken our discussions of AI’s role in reshaping analysis, education and historical perspective of the ways humans have used information technologies over time. As Harari notes, “the history of humanity is a history of increasing complexity in the ways we share information, and AI represents the latest in a long line of information revolutions. From the invention of writing to the printing press, new technologies have always transformed the ways in which we produce, preserve, and share knowledge today. AI tools enable scholars to explore sentiment, authorship, attribution, thematic hackings at an unprecedented scale, signaling profound shifts in the study and creation of literature. However, this technological advancement brings with it both opportunities and challenges. Just as the printing press once raised the question of who controlled the dissemination of knowledge, AI has introduced new ethical dilemmas”. He argues, “Every revolution and information processing has raised questions of ethics and justice. As AI-generated content becomes more prevalent, concerns about authorship, intellectual property, and the authenticity of machines and material religion must be addressed.” How do we define authorship?

So, the tension between AI as a tool for creativity and its potential to disrupt traditional notions of human authenticity is being debated. We are entering a world where the information will be processed by machines that do not think in human ways. So this shift requires us to reconsider what it means to be an author and the role of human agency in the creative process. I would also like to take an example of a folkloric adventure, “Heer-Ranja”, which is rich with cultural, emotional, and thematic complexity, making it an ideal case for studying the context of digital amenities and AI human synergy. For example, extracting the textual analysis and thematic patterns through AI tools. I can quantify the emotional landscape and the shifting of tone, mood, and emotional intensity throughout the narrative, and this would help researchers understand the emotional arcs of characters, especially Heer and Ranja, and how they correspond. So, all these things that we have been doing manually, individually, take a lot of time. Now, we can use these tools to do our work.

We can use comparisons of versions; we can have storage contextualization; we can have AI-driven preservation and accessibility of that. Yeah, I can either decide on preservation of rare or present manuscripts, or we can have multilingual translations of the same text through machines. And then the literary scholars. Of course, it will always be important to analyze those. I said we can reflect ethically on this role in cultural preservation and creative production. We can enhance collaboration rather than replace human creativity and use AI as a tool, not a replacement.

Rather than seeing AI as a competitor to human creativity, it should be positioned as a tool that enhances artists and researchers. Yeah, I can help generate ideas, assist the tedious task, or offer new perspectives on existing forms. By preserving human agency in AI driven learning, we have to maintain human centred educational models. AI government is not AI-driven pedagogy, critical digital literacy, human-machine synergy, and research. We have to be careful about data privacy, security and fair use of data, include strict data protections, ethical use of AI in academia, and digital literacy and privacy education. So, while I conclude this, we have to foster a cross-disciplinary collaboration in humanities.

AI tools for literature and digital humanities should be developed in close collaboration with scholars from the humanities, linguistics, and cultural studies. This will ensure that AI tools are sensitive to the nuances of language concerns or ethical considerations. AI systems must incorporate diverse cultural perspectives to avoid reinforcing our western-centric or narrow viewpoint. By integrating scholars from around the world, AI can provide a more inclusive and global perspective.

As AI tools are developed and employed, they should be subject to ongoing feedback from humanist educators and other stakeholders. This helps ensure that technology remains relevant, respectful and aligned with academics. This will eventually give rise to new forms of consciousness based on biochemical signals. Not only biochemical signals, but on copper wires and lithium chips. The new technology will reveal the interconnectedness, vulnerability, interdependency and boundaries of the world and fundamentally redefine the human species position in the 21st century. Not as a conductor leading the orchestra, not in the center of the universe or on top of the evolutionary ladder, but rather as a marginal string player able to resonate with all living needs and these new machines. Intelligence will change the world and force us to realize the ghost is in the machine and we are no longer alone.

Slide links:
https://docs.google.com/presentation/d/1c2j0yz7fCoI7fCWSVLLVwLSBJ6E3MZ3p/edit?usp=drive_link&ouid=114820326913843702946&rtpof=true&sd=true

Prof. Dr. Syeda Fatima

Professor and Chairperson, Department of English, Forman Christian College University, Lahore

Keynote Title: *'AI and the Quest for Intelligence: Emerging Trajectories in Literary Scholarship'*

It is amazing how writing as well as reading and... the experience of reading, each and everything has become an immersive experience in the true sense of the word, where both the readers and the writers and everyone exists in a world that is… collaborative...as voiced by Dr. Reham, in her keynote. So, would you call it reconciliation? I think all these words are very important, and I am going to... extend on what Dr. Reham presented earlier.

It's a collaborative effort. It's the co-construction... you may say, the co-creation both in generating poetry or literature, in understanding it, and in making meaning out of it. So, both we as teachers and you as students, most of the students who are here, we need to, again, enable our students to see that it's a co-creation, a co-construction.

We can reconcile both worlds to make meaning out of a particular text. So, I'm going to talk about this quest for intelligence. How is it supported by artificial intelligence? And I'll be talking about how it has helped with literary scholarship and what are some of the emerging ways trends, trajectories in literary scholarship So, the objective of this talk will be to explore the potential and relevance of AI tools to the discipline of literature. I'll analyze the workings of different AI tools, and I'll use a couple of examples here, out of the many others that we can use.

Claude, Toolsaday, Writesonic, ChatGPT, Ideogram that's used for generating images. So these are the tools that the literary scholars use. And then I'll be exploring the focus of the quest for intelligence and what new trajectories have emerged in the literary field.

The purpose is to discuss the intuitive faculties required for the creation and analysis of literary works. Now this is something that is particular to literature, this requirement of the intuitive faculties of the human mind. I'll also be exploring AI tools as a great means of assistance to the literary scholars. Finally, this talk will examine the effects of the over-dependence of literary scholars on AI tools and what it can lead to. So the point is, again going back to this quest of intelligence where I think since the beginning of the times, we've been looking for different means to assist, to support, and to augment human intelligence and what are the multiple ways in which we can sharpen and assist the human faculties, the human mind. So, this amplification of the intellectual powers of human beings is the ultimate target that we have in our minds.

There are different ideas. I mean, the researchers working in AI since the beginning of the 20th century up until now, the one big claim is that artificial intelligence will surpass and supersede human intelligence. And there are humans also who fear that maybe one day we'll become useless.

So, this idea of superintelligence or ultra-intelligence has been there for some time. And you can see this inexorable march to superintelligence. Different writers have talked about it. And what are the steps? The first step is to create a tool that can be equal to human intelligence. That's the first step. I think we're still on that step. And the next step is then superintelligence or ultra intelligence that we've been talking about. Now, I believe that this idea of surpassing human intelligence is based on a kind of simplification and a narrower version of intelligence. First, we have to understand the meaning of intelligence and the aspects of intelligence.

Now, what machines and, you know, these AI, such as the chatbots that they have created or the machines, computers, whatever you call it, they have focused upon intelligence as something, they have looked upon...to solve problems, that can make calculations, that can answer quizzes, that can resolve, you know, different puzzles. You can play a game and then also or maybe other coded and programmed tasks. The problem is literature doesn't work like this. And there are some other disciplines, other subjects within humanities, that don't actually work the way these things work. Formulaic descriptions are not there in the literature. So, basically what they're trying to do, these scholars, it seems as if they've been providing us with a prosthetic for human ingenuity, not human intuition, they're designed to sharpen our ingenuity, intelligence, how fast we can calculate, how the data can be collected and meaning can be inferred from that given data. That is what we call text mining and data mining and all these things that we do in classes. Also, it designs tools that can formulate abstractions and concepts and then it also helps to stimulate these to answer a question or solve a problem. That's what a computer can do. So, it will not imagine things for you. It will simulate based on human patterns based on human behavior and the patterns within those behaviors.

That's what it studies. And then when you ask the question, it will simulate and then provide you with an answer. Literary scholarship, on the other hand, depends on different skills of different human faculties that I just talked about.

It's thinking, learning, creating, and analyzing. These are the four areas. Now, when we infer meaning, especially with reference to artificial intelligence, the classic AI model focused upon the deductive method.

And the modern AI now is working on this inductive method for, again, inferring meaning. The problem is that in literature, we do use deduction and induction, but what we use most of the time is abduction. What is abduction? It's something that is beyond deduction and induction.

You know, everyone used to believe that it's the Earth around which all the planets and systems revolve. Everyone believed in that. That was an established truth.

What did Copernicus do? Or even, you know, Galileo? They abducted. They said, no, it's the Sun. It's the Sun around which Earth and all the other planets are revolving. It's not the Earth. That was a totally new idea. In literature, we call it contention.

.. our teachers used to tell us, I remember... what is the contention? How is your point different? How are you contributing to this research, you know? if it's just simulation, it's like if the computer is doing, it means that your mind is not working. So that's where the human mind becomes irrelevant. And that's the kind of faculty that is required for literary analysis, I would say even for creating literature.

So the meaning is inferred in a literary text by keeping in view the emotional aspect, the social aspect, the situational aspect, the contextual aspect...And other aspects that are somehow ignored in this quest of improving general intelligence.

As students of literature, we all know that texts have multiple meanings, and then there are multiple discourses within a single text, the faculties that are required, the intuitive faculties that are required, they are physical in nature, they are biological in nature, and psychological

in nature. And then these intuitive faculties are ultured by the emotional and the social aspect... the other day I was talking about this experiment where in psychology, few subjects were taken into a lab, and they were asked to evaluate a fictional character by having read a description that was given. Now, as they were going to the lab, they were asked to hold a cup of coffee. Some of them held a hot cup of coffee, and some of them were holding an iced coffee. Now, the ones who were holding the hot coffee described that person as significantly warmer as compared to the other group who were holding the iced coffee. So, these contexts, the biological, the psychological, and the physical even, the physical context with that, this is very important, and this is a missing link in the digital world.

So I'll be talking very briefly about a few AI tools. The first tool that I'm going to discuss is Claude. We all know Robert Burns, and I think this is an excerpt that everyone has read.

This is a very passionate love poem, “A Red, Red Rose” by Robert Burns. “Oh, my love is like a red, red rose that's newly sprung in June. Oh, my love is like the night that sweetly played in tune.” Now, this is by a human, a poet. So I used Toolsaday to generate a poem... A poet creates, and a human generates. So, I wanted to generate a poem similar to Robert Burns, and I gave it different prompts, and it asked me certain questions. What do you want? What kind of theme do you want? What type of poem? I said, okay, write a Sonnet, and then what are the keywords you want to use? What is the tone? And I said passionate, you know, passionate is the tone, the emotion, and the keywords I gave, “love” and “rose” so that it could create a poem similar to the one that I have just read.

So what was created was a poem instantaneously, within seconds, but the product that's there right in front of us, we've been doing in classes, comparative analysis also, without telling the students which one is generated by AI and which one is created by a poet, and yes, the results were different, but you see that what we noticed was that AI tools, not just Toolsaday, but the others also, they use a particular pattern because they are based on the study of human patterns. So poetry uses words like “whispers”, and “shadows”, and “dances”, so almost in every poem that we generated with the help of AI tools, they included these words. So the students would instantly recognize, this is generated by AI because they are using these words.

Because they think that something aesthetic, it needs to have such words. So “In twilight's glow, where whispered secrets dance, dance, in a love unfolds the patterns of a rose”. So, the perfect rhyme scheme is there...but there is something human that is missing about this creation.

Now, I'll move to the next tool. This is a very famous quote by Shakespeare, “Life's but a walking shadow, a poor player, that struts and frets his hour upon the stage, and then is heard no more: it is a tale told by an idiot, full of sound and fury, signifying nothing,” very philosophical, very much quoted, this is the second tool that I'm using, Claude.

Again, I requested it to generate a poem that is similar to Shakespeare's poem, “Life's but a walking shadow”. Now again, the results are, I'm not going into details of literary analysis

because it's not what's meant here. I just want you to notice that again, the words are repeated, “strut” and “fret”, and “shadows”, “fleeting moments”.
The rhyme scheme is perfect. All the words that I wanted to include, they are there. Some of them are even repeated... as a generation, it's a good attempt. But as a creation, again, it still misses those links that I talked about, the emotional, the psychological, the physical, the cultural, all those aspects which are very human in nature. Now this is what Romeo said about Juliet.
He's talking about the bright face of Juliet and he says, “What light through yonder window breaks? It is the east and Juliet is the sun”. And most of you have read Romeo and Juliet and you know this, you understand what Romeo's age is, you understand the nature of connection between the two, and you understand the kind of thing that he's talking about over here.
...the third tool that I've used over here... I've used different tools just to make you see which tools that are more intuitive, that, you know, grasp the emotional appeal also.
So again, what came out...the poem that was generated, again, it followed the same sequence, perfect writing and then mentioning the same words, “shadows”, “whispers”, there is “dance” also, if you see in the second stanza. So, certain words and certain patterns are repeated. Why? Because it's a simulation, it's simulating, it's not imagining a new poem.
I'll skip this example, we are short of time, but this is the next tool that I used, Writesonic, with Yeats’s poem “The Second Coming”, very famous again, and the results are almost similar, you can see the words, “darkness” and “shadows” and “whispers”. Now, I just wanted to create something, because this is what I do in classes...
...the fifth tool...I wanted ChatGPT to come later. I requested it to please generate an image of a Punjabi fairy and this is what created, a very good attempt, I would say, because look at the way the fairy is sitting. A very minute detail, by the way, because the Punjabis are considered to be, you know, in freestyle, you know, sitting and the dress also, there is some attention to the dress also, but the rest of the details, I mean the flowers...so it makes good attempts... but we have to remain alert as students, we have to remain alert, which details to take and which simply question or challenge also.
So, I wanted it to create a frozen character, that is Sindhi frozen. I love the dress (referring to image on slide), by the way, but then, yes, so many details that are attractive, so there is a mosque also in the background, did you notice that, because I said Pakistani Sindhi frozen....favourite characters of my daughter... so, there is a mosque, but look at the trees on the right side. So, it tries to conceive, but then, you know, there are some limitations, which we as teachers and as students have to keep into consideration.
...this attempt that I am making here is just to make my students especially realise that what are the limitations, you cannot completely depend upon whatever AI is producing for you, because artificial intelligence is good, it's working at a greater speed and in a very good way, but there are limitations to it. Intelligence that you have has to, you know, be used also. Now, I thought of using another tool, Ideogram, that too is an image generator. I wanted

to see whether it's more effective or not, but I think that not that much, because this is a Balochi Tom and Jerry (again speaker referring to the image on slide)...Okay, so even if you are just going on the details, where is the trousers, so this one, and it gave me different options, you can see on the right side, so I selected this one, which looked a bit maybe... the setting in the background, but then the rest of the details again... I have some Balochi students sitting here who would not agree to the kind of presentation that's made over here. So, going to the last in the, yes, Pakhtun cute bunnies. So, you can see, again, coming back to ChatGPT, because Ideogram is not what I liked, so you can see the details are there. This time it's closer to reality because there are, you know, mountains in the background, there's a river, so maybe it had more data to simulate, as compared to the Baluchi data. So, again, it goes to the question of representation and the data collection and the, you know, so many other questions that are associated with it....then I engaged in a conversation, talking about emotional intelligence, and I asked ChatGPT, how emotionally intelligent you are, and it was very honest... emotional intelligence itself is more about simulating my emotional intelligence, it's more about simulating empathy and understanding based on patterns in human communication, rather than genuinely experiencing emotion...ChatGPT responded, I've never experienced any emotion, so how can I describe an emotion in a way that you are expecting me to? So, I can recognize emotional cues in text, such as sadness, anger, or resentment, and respond in a way that's supportive or appropriate for the context, and then it goes on telling me how I handle emotional intelligence, both for creating, generating literature, and for analyzing or appreciating literature. This is how a tool would recognize or handle emotional intelligence. It would simply recognize patterns, I would recognize, I would empathize, I would support, however, it very clearly tells the limits, I don't feel emotions, so my responses are purely analytical.
And then it says, my understanding is based on patterns, you see? So, I might misinterpret subtle or complex emotional cues, and I lack personal judgment of cultural nuance that a human might bring to sensitive situations. And lastly, it offered me, if you'd like, I can adapt my tone to better suit your emotional state...

But anyway, the conclusion is that an informed use of the AI tools, and more than informed, my students, I would say, a responsible use of AI tools should be made for conceiving, creating, and analyzing literary texts. It may be assistive in exploring newer trajectories in the field of literary studies, however, a blind and complete dependence on the tools may be destructive for the creative abilities of the students. Also, AI may be viewed as an assistance tool, and not as a replacement of human intelligence.
Thank you.

Slidelink:
https://docs.google.com/presentation/d/17PxwZHvO4dbV201IfKh2K4jsvUF8BVN2/edit?usp=drive_link&ouid=114820326913843702946&rtpof=true&sd=true

Dr. H. M. Zahid Iqbal

Associate Professor & Chair of the Department of English Language and Literature at the University of Lahore

Keynote Title: ***Redefining the Literary Canvass; The Confluence of Technology and Creativity.***

Thank you very much, Sir. I am grateful to the Department of English FC University, FCCU, HR University and doctor Fatima whenever they send us Sort of e-mail for examiners.And secondly. I can't express, you know, these feelings. I have said sometimes in humans they fail to express what they want. And that is discussing something in front of someone who was my teacher, Doctor Yadav said. Who taught me stylistics when I was doing BS English Language and Literature at International some university and then when I did Amphil from the same university. He taught us the methodology. So what else do you need to speak or to get an opportunity in front of your teacher? So I I thank Doctor Fatima once again and the department. Who gave me this opportunity And we have a Galaxy of intellectuals over here. Natasha Faziar, Dr. Reham, who has been with us for the last 2-3 days. The future of AI in linguistics and literary studies. And we have been listening to these discussions on the future of AI of importance, you know, literary studies. I just want to talk about two points. As Doctor Sonia was telling us that. Like if you ask AI to translate Kafka or write some sort of short story on the pattern of Kafka, it becomes problematic. The complexities perhaps are compromised.So it, it means that to a little bit extent really you know, the people who are writing, you know, AI in the reference to literature, Or the father of this AI, John McCarthy, Did they almost a little bit, you know, sort of agreement they have and that is that it cannot replace human cognition or human thinking, that is.

But so far, the understanding of most of the intellectuals or critics who are writing about this phenomenon. Uh, so just two points I would be talking about, first is the authority in the era of AI, the authorship with reference to creativity or creative literature or literary study. And the second important point will be are there any questions apart from this human replacement or human cognition? Like Doctor Sonia was referring to some biases within AI tools, if there are. And as there are, I would be referring to some of them. Of course you know, within a few seconds or within a few minutes. So I think then we need to rethink or you know, redefine what we think of literature or literary canvas. That is, you know, the correction of my heart. Now coming to the first point when we talk about authenticity, if we think that Is the sole property of the one who is writing, then that has perhaps never been a settled sort of agreement between critics, for example, if you just recall TS Eliot's tradition and individual talent. So he's quite clear, he will tell you that in order to write poetry you have to write or you have to read from homer and down to your own day. So exclusivity has never been a sort of, perhaps, perhaps it has never been a sort of agreement. Among critics and if you ask first

comparative critic or comparative point critical poetry uncertainties about the author shape about its publication longinus.

He would tell you that in order to become a great writer you have to read the Classics, and if you read the Poetics, so Aristotle will be telling you, of course it is an art of imitation, but unless you read like Oedipus you cannot become great writers. So exclusivity perhaps is not the question.the way we are perhaps talking about that the AI is there it is threatening the human mind or human career to potentials it is taking. No, I think that is not an issue as far as my understanding is concerned and as far as I look at this you just recall Victorian critic the function of Criticism as presented, Matthew Arnold. He went on to claim that the best poetry or the quality poetry is impossible unless and until you have an informed or nuanced criticism in the background. So it means that it is a sort of dialogue. That the writers are to be or have to be in. So here comes them. Yes, the place of AI, . Just to like, look at this somewhere, this, this point, it is an amplifier, so for me or for these critics, because these are not, you know, my thing. These are not my words. I have taken them from some critics.

AI serves as an amplifier for creative writing. So, for example, you know, it removes barriers, as Doctor Sonia was telling you that it removes barriers and What sort of barriers. And the other day, yes, Doctor Fatima was telling us that it cannot capture our intuition. So what can it do? Maximum, maximum, It can refine your writing, it can remove barriers of linguistic or structural problems. For example. So here it can serve you in a similar way, Classical authors or classical critics have been suggesting us. that you need to from homer, down to my own day, it is one single series of literature. When you talk within Western paradigm, in the words of TSL. So my dear, it means. That authorship is like a rollabout, the other day, Doctor Nadia was telling us at our international conference that rollabout when he wrote like the death of the author and he was not perhaps the death of the author.

So the authorship, to my understanding, was never a great question that the AI is there to intervene or undermine or threaten. No, the way previous writers. Intertextual, sort of personal, you know, capacity speaking, the way they have been providing a reporter to the upcoming writers. Similar way perhaps AI is there to facilitate us to amplify our ideas, to refine our ideas, to reshape our ideas. But yes, we know It has some limitations, as you know. It can't, you know, perhaps capture our intuition, our first. That will be the second point of my talk. This was my first point, the authorial aspect or the authorship position within these emerging transport tools in the age of AI that is but faiz says, when asked what is poetry? So he said, “ham parvarish-e-lauh-o-qalam karte raheñge, jo dil pe guzartī hai raqam karte raheñge”

What is this? That we would continue nurturing the pen, for what? Whatever comes to my heart, I will try to narrate that. Now AI fails there perhaps so far. So far it is a sort of agreement among the critics that it cant You know, peep into the human heart. So it means that a Human mind is still there, but this mind should be a well informed mind. And that is the second point of my discussion. And let me take that to because yes. And OK, yes, it has, you know, it has positive

aspects. I just forgot to mention it, democratizes, you know, literary narratives. So you're asking the other day, someone was saying “she” about chat DPT and doctor Bushra asked her that “why are you referring to this with this? And you know she for.” So therefore I say he OK, So, but there is no like, you know, question of perhaps this gender dynamic. So if you ask him or like you know, to translate something for you, yes, it performs wonders. That is the second, you know, point of my discussion and that is. Apart from its benefits, if it has biases and it has. Because so far the other day, Doctor Reham at the ending session of our second session, when Doctor Nadia finished the talk and she told something about data colonialism. And they were wiring a paper on that as well. So it is an alarming thing or it is a burning question for literary critics. And that is the point which I want you to focus on.

Walter Mcnodo. When he writes, see this one, I'll let him give you the title of the book first of all. And he types,It is self explaining for example. If you perhaps look at this, “the darker side of Western modernity, global futures, decolonial options.” So what is his main argument over here? If for example, AI has biases because the techno giants, European techno giants, we know this very well. We need to work on that, on this and I think 2-3 weeks ago, Organize this sort of workshop for all the heads of the department and institution of Technology, Science and Technology from UAT. The director gave us a lecture and he told us that we are working to reserve or provide an indigenized sort of AI and we are working on that. for example, if you ask about ghalib, they will provide you with some more sophisticated information. They said that we are developing a corpus. So it does not mean that nothing is happening. Some people are doing, you know, the collaborative efforts are concerted efforts are going on. But what he said, he says actually in the 20th century, although these techno giants. So you know, of course, you know, democratic norms and human norms or human rights, you know, whatever the meta narratives they use, they try to capture information or they continue having a sort of monopoly in terms of finance, in terms of, you know, a knowledge production that is there. But he says two things are happening in the 21st century. The first one is de westernization that has already taken place. The Dean side was referring to the deep sea. I don't think that is just a matter of economics. It is. Intentional, on the part of China, why Because global South in order to challenge, in order to meet the challenge that they are facing, where their indigenous or their local voices are compromised, they have to come out of instead of just criticizing AI tools, chatGPT or meta, that they they rationalize or they politicize the matter. You need to provide some solutions to them.

And you know, perhaps those who belong to some political science, what is “BRICS”, uh, sorry, Brazil, Russia, India, China, South Africa, that is a sort of response to G7, the Group of seven. They also have developed the new development plan, like IMF or Western countries have for example IMF or World Bank, they have the new development, but that is just a matter of decade that this, you know, struggle started on the part of global South to provide an alternative app steam and alternative framework of politics and alternative frame of democracy or finances. So they are doing this. But The thing is, this is the first point, de westernization has taken place or is taking place. The second thing is, that is the need for decoloniality and he says that, we should continue to try, for what? To delink over perspectives. OK, Over perspectives from what? From Western perspectives, from Eurocentric perspectives so far.

Now the last example that I will give you. Thank God that AI, at least meta AI has accepted that at this moment, when I today, I asked just to meta AI because that was readily available through WhatsApp. So I asked you what about things that fall apart? You know what, I was

happy that it at least told me a classical text of African literature. But my dear. One HYOD went to a conference which he reported in "An Image of Africa", an article that he wrote in response to Joseph Conrad's “Heart of Darkness”, and he was attending a conference he has narrated in the first paragraph. “I was going through a corridor and someone asked me. Oh young man, what do you teach? I told that American professor that I teach African literature. Go and read that” in 1970s. That American professor was like surprise. Is there something with the name of African literature? That you teach? So generally, yes, I teach African literature, he said. OK, then I should attend your classes. But after 50 years at least, of course we say that we know that these are Western centric because this flow of information is under their control. But it won't go longer. Yes, it won't go longer. Like people are writing about it, they are taking some concerted steps towards that. it would be materialized and it is what is happening so and if you ask this same. Keep Meta AI. What about the heart of darkness? It will tell the sort of epitome text of modern literature, so it regionalizes your literature. It universalizes the similar tendency. So if these questions still persist within these, you know, automated sort of, you know, these softwares or these programs, we need to be, let's say, an informed bit creative. there comes, yes, Matthew Arnell, his best criticism is there or he then best literature is possible. So it's not just ChatGPT is like a sort of compromise, no, Do not be threatened, It is there to assist you. But as far as the epistemic violence is concerned, that is still a question. So if you think that it is a question and that it is an option. It is not necessary. Decoloniality is an option. If you agree with my viewpoint, it's OK Otherwise it is not compulsory. Iqbal ne khatta, “yeh Jahan ye kā.enāt abhī nā-tamām hai shāyad, ki aa rahī hai damādam sadā-e-kun-fayakūñ” Fazi saab said, “haañ talḳhī-e-ayyām abhī aur baḌhegī,haañ ahl-e-sitam mashq-e-sitam karte raheñge, jo dil pe guzartī hai raqam karte raheñg” Thank you.

Slide link:

https://docs.google.com/presentation/d/119sESVKv2gJLFHofym-N6WsGEqIdntQI/edit?usp=drive_link&ouid=114820326913843702946&rtpof=true&sd=true

Dr. Khalid Mahmood

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Keynote Title*: 'Digital Data Analytics in Languages & Literature in the Age of AI'*

Thank you, Sir. So, dear participants, today I will talk about Digital Data Analytics, especially in languages, literature and linguistics. I will take you at the back end of AI. What happens over there, and what kind of grooming do we need at the back end of AI? What happens over there primarily? I will start with our journey, it is kind of a digital journey.
So, I just look at this word… We find so many keywords over here. Keywords mean they most significantly occur in the text… There is NLP, which is natural language processing. All the natural languages are human languages. Human languages are natural languages as they can be contrasted against the machine languages. There are machine languages and natural languages. So it means all the human languages are natural languages. All are indigenous languages. Even our localized languages. Even the languages of social media.

NLP is natural language processing. We can see that there are so many. There is natural statistical-like modeling. This statistical modeling is very significant... You can just glance over the keywords that we were talking about in our discussion. So there is a paradigm shift with this big data. This data has become easily accessible. I even know those times when we did not have any kind of data at all, for example, even a book. We had the library membership of the American Cultural Center or the British Council, or near the Gaddafi Stadium, there was a French Council Center, and near my home, there was a center. So we used to have some kind of requirement, some kind of need over there for a book. And then they used to bring their books from outside, from foreign countries.
Today, we live in an age of digitization. Each and everything is at our fingertips. We have e-libraries, we have electronic digital databases, we have repositories. So it is big data. LLM is a large language model. These are the models which have been trained. Clear? All the AIs, including ChatGPT, DeepSeek, Google Gemini, WhatsApp, or Facebook's Meta, primarily use big language models. These language models work on trillions of trillions of words of data, and trillions of words of data. Primarily they look for different kinds of patterns. There is pattern recognition just like facial recognition technology, which recognizes certain patterns of your face. Similarly in image processing the images have certain patterns. So
human language is highly concrete and highly systematic. This is why it has asked for its patterns and it has identified some of these patterns.

So, primarily, digital humanities is the umbrella term. Then there is computational linguistics. This computational linguistics... At the last, you can just look at functional linguistics. Primarily, all computational linguistics go for the premise of functional linguistics. It is very

strange to know that and see that, today in contemporary times, the departments of functional linguistics are next to the department of mathematics. Just Google the Department of Mathematics and Functional Linguistics, and you will come across so many departments all over the world. Because in AI, in natural language processing, in computational linguistics, we work with computations and permutations. We consider language as a large set of mathematical symbols. We even use word-to-vector technologies, where we convert words into vectors. Then we give a proper weight to every word, with the basis of their following labels like that. And then the weight is different over there.
So you can see this computational linguistics, natural language processing... Dr. Kaur was talking about corpus linguistics. So that is significantly important because of the back end... If AI just works on this big data, you can see that, there would be a blank paper without any... So, this is a digital literary study, especially in literature. The proper stylistics... There are also statistical stylistics and literary and linguistic computing. So, these are some of the areas that have flourished, which have emerged, with the advent of AI, with the advent of digitization or digital literacy. I have talked about these functional linguistics. So primarily, it's a large collection of data that is in machine-readable formats. Then we talked about data, the data might be verbal or non-verbal. It might be written, spoken, or multi-modal data, that is related to multi-modality. Images, pictures, movies. Movies are also primarily moving pictures. So you can see that we have this data just within the blink of an eye. Yeah? We just receive and disseminate millions, billions, and trillions of bits and bytes of data just within nanoseconds. So one thing goes over there, that is just the reception and the generation of data.

These are some of the areas you can just look at. Lexicography, so there were talks about Lexicography. Now, with big data, it has become a very simple task, for example, Oxford Advanced Learners' Dictionary, Cambridge Learners' Dictionary, Merriam-Baxter, Collins, and even the very first project that was initiated at the University of Birmingham. At that time, they produced very big data. If there were more than 500 million words of data, that was them copying it. Those dictionaries were developed in a very systematic approach, using the digital data at the back end. So, that is lexicography. Then we can see that there are grammatical studies, especially if you study the syntax, there is parsing... Then with the register of the genre analysis. Then, especially across the timeline, we can see the language change. There is some kind of diachronic study of language, the language change phenomena. For example, if you just take the language, a particular language, from the 1980s, you take that data, and you compare and contrast the data from the contemporary data, we'll come across the significant points, the departure points, where some kind of significant happenings occurred on a timeline, on a diachronic scale.

In translational studies, we can see that just when we're translating, what happens is not a Cinderella’s magical stick that we just click and that is it. There are very, you can say, exhaustive tasks that go at the back end. So just think we're at the back end, I would move further. So we can see this as the corpus of linguistics: this corpus, the top row, the main house for NLP, machine learning, deep learning, and AI. So, primarily, this story starts with the routine text. We call for text. There is data dumping, and data crawling... The first step is tokenization or word segmentation. There are different

types. For example, in all the languages, they provide the tools and the libraries for tokenization or word segmentation. For example, in Python, in C++, similarly in Perl, in R language, in Java, in Cypher, and in Python. All the languages provide their libraries for tokenization or word segmentation. Then we tag the data for different kinds of annotations. It depends on what kind of annotations we need. The very simple kind of annotations and the part of speech annotations, right? Further, we can allocate the markup of our data for other features. Like, if you are looking for some kind of Marxist text, the text is Marxist. You see there is a post-colonial text. There is some kind of feminist text. Then we can put a markup over there for different kinds of matters, different kinds of theories, for example, from different frameworks, from literature and linguistics.

Then there is sentiment analysis, and we talked about that. There is data mining. Name-related recognition. The text extraction on the slide is saying, for example, you ask some AI tool to make an abstract of a novel. It will provide you with a 150-word abstract of a novel or a thesis. So how it works, primarily, is based on its algorithms. Then there is web crawling, web scraping, Artificial Intelligence, and Optical Tracker Reclamation, very important, where do you find it? If you just look at Google Books, that is called Google Ngrams, if you just Google Google Ngrams, you would directly go over there. Billions of words of corpora have been developed based on books. It means all the printed books are there. So many books are handwritten from the 13th, 14th, and 15th centuries, and this Google Ngram corpus starts in the 14th century. And that is ever-increasing over time. It is the dynamic corpus. So we can just go over there and look at different dialogues. There are so many books that are not in digitized form. So what do they actually do? Google teams all over the world, in the big libraries, they just make OCRs over there. Even handwritten, they make ligatures of that, just to identify the characters... So, that is one of the very important areas in natural language processing. There's optical character recognition, just like facial recognition technologies... Similarly, there is optical character recognition.

Then it is linguistic and literary analysis. That is information, extraction, and architecture. It is an algorithm. So we start with the raw text. Simple, dot, clear T, X, T format, using UTF-8 encoding. Why? There is a universal format and that is the most frequently used code because that can be read across a plethora of platforms: Linux, Windows, Android, Apple, and all the platforms. So we start with raw text or the string. In all languages, they call it strings. The strings are, it means the language, human language, NLP, natural language, that data is in the string format. Then we do some kind of sentence segmentation. You can see that in so many languages there are no punctuation marks, just to mark the end of a sentence. So, there are other mechanisms. It tells me that in sentence segmentation, for the indigenous languages, we have to look at the languages and how the language's orthography is written and how the orthography of the different kinds of scripting techniques... That we use over there. Then, every word is tokenized. So you can just see, when you go to simple AI, what it does... Billions of words of data are over there, here there's raw text, just like a big warehouse of text.

Tokenization, sentence tokenization, word tokenization. So in this tokenization, there is a list of strings. It means the words are tokenized. Especially in Urdu and so many other local languages. So this tokenization is not a simple task. Clear? Because in English, the simplest, clear, criteria is over there. There's a white space. So white space is the biggest indicator for a word separator. So you just tell the machine that when you find a white space, just submit a word. Just within one click, even a billionth or a trillionth of words of data is submitted over there in words, words, words, words.

And then we go to tagging. Because the computer doesn't know. Even AI doesn't know the meaning or the semantics of the words. It just reads the structures and patterns. As Dr. Afsar was saying, there's a natural language understanding. There's an uphill task in front of humanity. Generation is not so much a challenge as far as natural language understanding is concerned. Because one word can be interpreted or can be given different meanings in thousands of different contexts. Qualitative meanings are those that differ from context to context, from culture to culture, from society to society, like that.

So it's a part of the speech tag. There are so many parts of speech tag. We can select a tagger according to its accuracy, according to our demands. Somebody was talking about an Urdu tagger... There's an implementation of the Urdu part of speech tagging in Python. Simply, there's a Python library for that. Just download it on your system. You'll have the raw text over there. Then after that, it will just organize and then it will do some kind of part of speech markup over there. Then there's entity recognition, the part of the speech system. So, the first one is a part of speech, then it's entity recognition. Sometimes it's also called Named Entity Recognition. Because when you say window says, window is one window that is over there. There's one window operation. So it means a computer should know over there, the context, that which window is being referred to... So window is a named entity recognition that would identify all the proper nouns over there... Which are names. It would treat it, the names, as proper names like that. They have their mechanism of the criteria. Then relation recognition. These relations, for example, that's also an uphill task to identify. For example, you say, he says, he says he. Oh, the computer would identify the anaphora of this one, the whole reference. That's called anaphora resolution. So it's natural language processing, anaphora resolution. There's also one challenging task. And most of the time the computer has received, especially the machine, these points where there are concerns about the anaphora resolution.

That's very simple. There's a text. NLP, natural language processing. There are the tokenizers. There are the taggers. There are the parsers. Parsers are the parsing. They're at the phraseology level. So we move beyond tokenization. Tokenization is a word for tokenization. It's a morphological analysis. When we just move beyond that, that would become a syntactic analysis. So it means the tokenization of phrases. If you want, for example, from billions of words of data, you want to collect all the NPs, noun phrases, or all the prepositional phrases, or all the, you can say, coordinate clauses like that. It's very simple.

In Python, you just need to write one simple script over there to identify all. Just extract from your data. So there's the parsers. So there is primarily syntactic parsing. And there's NER and so many others that it depends on the data. If the data is, for example, spoken data, then you'll need to annotate the data for, say, its stress patterns, its tones, its syllables, for so many things that are over there, like that. We'll need to annotate the data for these different times. Then there is an output that we get from there. I will just give you some examples.

Here, this sketch engine has become very advanced. We have advanced it to include AI tools. At the back end, there are different kinds of algorithms for tokenizers. It even works with Urdu language. It works with Arabic language. A very big Urdu copra that is embedded over

there. And even, there are billions of words of N1010, like that. There are billions of words of copras that are over there. Then, the most important of all, we can use our data.
We can just go over there. And it is also very crucial to know that one million words can be processed in any language, without any subscription. I think one million words, that's how much.

Our sketch engine, I have seen that there is a... I think some people don't bother about the commercialization or some kind of prices like that. I have even seen some researchers that have put billions of words of data in sketch engine and it gives results. It just gives a very courteous reminder over there, “You have exceeded the limits of our data usage. So, please subscribe for that.” So here, you can see that the word sketches is one of them.
It makes the sketches. For example, you can see nouns modified by the team. Like team members, team captain, team leads, team leader. In linguistics we call them collocations. John Sinclair called them collocations. It means grammatical patterns that come together with one another and collocate with one another. They are called collocates. The collocational analysis.

So primarily, these are the word sketches of the collocations of the text. Then, modifiers of “team”, words with “team” as a subject, and words with “team” as an object. We can see that even the... All the processes, that how, what kind of verbs are over there. It means it would just look for all those patterns in the text that's provided to it. There's a British academic written English corpus. You can see that. It's important to know it goes with sequence.

Sequence is a corpus-based language. Again, I would refer to the regular expressions. They are critically important for the researchers, regular expressions. We want to find out the particular patterns in a text. Clear? How to find them? You need mathematical language over there. That's called regular expressions. Mathematically, you just write here. For example, you ask it first “I need a verb and then before a verb, there should be a noun with three modifier places or qualifier places. After the verb, I need at least two adverbial adjuncts with that.” After that, there should be coordination. You can write patterns as long as you like. You can see that. When you ask ChatGPT, it will just give you a few examples, 15 examples, 20 examples that would say that okay... In three like that account, you can have only this kind of data.

But just by practicing, just by getting a bit of competence in data analytics, we can work with billions of data by ourselves. AI can also work on the same premise. So you can see it is important. What have we seen? In regular expression, we call it a backslash. There is a W with a static sign. Static is a white card. It means any word... We can take two words in between. We can take three words in between. Human language is very complex. You won't find such types of

patterns over there. So just think about the pattern, write its CQL, have the record expression, and get the results out of that. Then especially, you can see that there is some sketch engine I worked on, especially the crisis. The crisis in an economic context, the economic crisis, economic crunch, economic bubble, inflation like that, economic life. So many words are over there. So you can see that from the sketch engine...
I made a thesaurus. There is a one-click option for making a thesaurus of its own. So it means all the same sets of semantically related words are part of one word family. You can get all those words over there. There is actually... There was one thing significant. There were so many verbs, prepositional, and verbal phrases. And everything was going down in the discourse. “Break down, right down, way down, slow down, go down.” This is corpus-driven. That corpus drove me towards this and then I looked for this down, down, down. And primarily the conference where they presented this paper, which was also about collapsing Europe. I presented my paper over there. That was about even "down". Everything was going down from there.

Then these are the word sketches that we made over there. Last thing I wanted to show you over here... These are from Shakespeare. I discovered how Shakespeare celebrates his protagonists, and heroes and demonizes the villains. Celebrating the heroics and demonizing the villains in the corpora of Shakespeare, Chaucer, and Spencer. I took all of their corporas and looked at how they represented their protagonists and their villains. That was my paper at the University of Kent, Canterbury. Then by using Python, for example, you will see that I developed this manual expression on my own. For example, just by your intuition, you can see that all the words ending in E-G, there's a simple past... Again, complexities are there. It is just rough. Again, we can just make it, we can polish it. Similarly, for patterns, I wrote different kinds of patterns.

Then based on these patterns, if we just put a text behind that, the text will find out all the patterns over there. So there's one way to encode your data for different... For example, your data might be economic data, so just look for certain economic features over there, give it a coding, and make a kind of regular expression staggered by your own, and that will tag your data for the extraction of the particular features you want to get from that text. Okay? There's just, the last example, there is a stress pattern. That is in spoken data. You can see that the Python language is very similar to the English language. That's why that's a language that is used by programmers all over the world. That's why it's popular. It's just like writing English.

All the other languages are mathematical. So that's why Python is a favorite language. You can see that I told it that 0 means it is unstressed, 1 means there is primary stress, 2 means there is secondary stress. Then I made this simple program: to identify the words with... Find out all the words whose initial syllable is unstressed, then primary stress then again unstressed then secondary stress.

You can write anything like that. It would find all the words from even big data that have the same pattern. You can see that this pattern is 0, 2, 0, 1, 0. You can see that it's an abbreviation. Clear? All the words. It means even with billions of words of data, you are teaching stress to your students. You just want to improve your stress patterns like that.
Excellent development. Excellent development is the name of the stress pattern. Okay, that's fine. That's from my side. Thank you for your patience.

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Prof. Dr. Ayaz Afsar

Prof of English IIUI, Ex-Vice-President (Academic) & Dean of Faculty of Languages and Literature, IIUI, PhD UK, & Postdoctoral Research, University of Birmingham, UK

Keynote Title*: 'AI in Linguistics & Literature: Ethical Considerations and Innovations'*

Assalamualaikum and good afternoon. From my introduction, you would have seen that there is not any specialization in AI or digitization, which we have… But of course there would be something I would like to share with you. I think we missed one point, which is that I retired last year from International Islamic University. And this Dean, Vice-President, other departments, whatever, has nothing to do with the scholarly work we have been hearing since this morning… That is why you can look at my presentation: 'AI in Linguistics and Literature'. It is for the students. How many students are here? Can you raise your hands? Yeah, quite a good number of students.

My second part is 'Ethical Considerations and Innovations'. That is for the alumni, especially the Rector, Dr. Jonathan Addleton. And there was a Vice-Rector here. I'm going to ask him a question because I am so impressed that this university is doing so much which I have not seen any other university do. But I will talk about one point, which is missing, and that is that I have not seen any, even from HEC, policy for the use of AI in Pakistan. There should be a policy from HEC and if it is not from HEC, you need to have your own policy for using AI in a responsible and ethical way. So we need to have a policy.

Okay, a brief overview of the first part. As I said, this is for the students. This is not for the specialists. So what is AI? That is a question… Artificial intelligence. Yeah, that is just an abbreviation that you said before. But what does AI stand for? Well, in simple words, its definition will be that it is the ability of the machine to perform tasks, those tasks which we expect from human beings. So if machines are behaving like human beings or having human-like intelligence… And what is human-like intelligence? That as a human being, we learn. We solve problems. So if they have this ability, that learning, and problem-solving, then they are behaving like human beings. I am giving an overview of this, to make you familiar that this is not something new, you are already familiar with it. For example, it includes… Well, I have heard that people hear too much about AI, but know very little about it. Yeah, in the morning session there was Gen-AI, Generative AI.

What is the difference between AI and Generative AI? Have you heard about this? No, no, not a specialist. You are sitting in the front row. I am asking those students who are sitting in the back benches… AI is artificial intelligence, you said. But Generative AI is the latest phenomenon. You would have been hearing so much about DeepSeek and ChatGPT. They

have the ability to create. It is more human-like, closer to humans than any other model, including generative or creative tools. The example is ChatGPT, which we use in natural language processing, NLP. Also, we have seen the digitization of projects, which is used in images and in art. Then we have advanced web search engines that are also part of AI. We have Google Sites and so forth.

Then we have the recommendation models, which recommend which program is best for you. You get the recommendations, and they are used by YouTube, Amazon, Netflix. It is also understanding human speech, like Siri, if you are using an iPhone, or Alexa. Then it has also been used in self-driving cars, like Waymo, and competing in strategic games such as Chess. You know that in two of the states, in the United States, they are using self-driving cars, which means no human is driving, the machine is driving. What we can foresee is that it will be much more frequent in the coming days and years. So the Waymos will be navigating roads using AI.

AI is used in linguistics, but there are four areas where it has been the focus of the research, and it has made a significant focus. First is natural language processing or NLP. It is now also used in natural language understanding, NLU. Then it is used in machine translations and automatic translations. It is used in text analysis, as you have heard and seen in the previous presentation. They are now used to analyze large data sets, Corpora. Then it is used in speech recognition. These are the four major areas where AI is focused: natural language processing, machine translation, text analysis, and speech recognition.

Well, some of the examples of natural language processing are, you will see, it is Open AI. So there is a difference between Open AI and Generated AI. What is the purpose of Open AI? These are the models that generate and analyze text. They take insights from language structures, and then we use it. As compared to this Open AI, what the Chinese did, you see last week, the big reports, on the 20th of January, that was their DeepSeek. The people had… There was one trillion dollars lost to other companies which had been using a particular type of chip. The Chinese development was very cheap, as compared to the hundreds of millions spent to create state of the art facilities and chips. The United States and others made these chips so that the state of the art knowledge does not transfer to China. But the Chinese were so great. They found other ways, alternative ways, and developed something which doesn't even need a chip or big data.

Okay? So another, in the field of natural language processing, is NLTK: Natural Language Toolkit, and I think Dr. Khalid will be presenting this topic. He will talk about this, his expertise in it. So what NLTK does, you see, in linguistics and in text analysis, is that it analyzes text. There is tokenization, which breaks the phrase and sentence and weighs into its different parts, morphological parts. It is a step, for example, there is a word “run”, and “running”, and “runs”... It does sentiment analysis, about the emotion and tone, that type of thing. Then there is spaCy, also very simple, as compared to NCOG and others. You just give your own data, and it will tag your data, for speech tagging and especially, Name Entity Recognition. What are the innovations that we have? Innovations in linguistics are that there are real-time translation tools, like Google Translator and DeepL. Some of you might have used it. They give us near instant translation including idiomatic expressions, regional variations, and cultural nuances. It is getting better and better, as far as accuracy is concerned. Then you have a sentiment analysis. These models analyze the emotional tone, themes, and stylistic elements of different texts.

Then you have language learning apps where linguistics focus. You would have Duolingo or Babbel and others, which have made language learning as personalized and according to your needs. Then comes the voice assistance. In voice assistance, you say something and it produces the text for you, to give you some insight. Duolingo is very popular and it has been for a long time. That is an app that uses AI to personalize language. Then there is another one, that is Babbel, which incorporates AI to provide tailored lessons and feedback according to the level of the student. Then you have ChatGPT which has a function, just like conversation, like a dialogue. Okay, that was the use of AI in linguistics and four major examples.

Now, the use of AI in literature, and there was a lot in the morning. I'm not going into details. You have seen that it helps in creative writing, in sentiment analysis, in text summarizing, and paraphrasing, and many other ways. Dr. Fatima was using the tools and other things, and showing how it is helping the creative writers. Okay, in literature, there have been three major projects. First of all, it is digitizing ancient text. All the manuscripts have been transcribed and that has been a big purpose of digitizing. AI is used to decode and deconstruct ancient text. If you look at the biblical text, for example, Deep Sea Scrolls, they have been deciphered. It has been used in audio books and accessibility. Everybody is familiar with that. You just click the text and it will read for you. There are many audio books developed, where the narrators like, for example, WaveNet, Google's WaveNet, narrates the whole text in a realistic voice, making literature more accessible, especially for those who are visually impaired.

Language revitalization is how AI has preserved languages in digital languages through various technologies. It has also been used in writing novels. I'll give you one example of how it is helping to write novels. Have you heard about this? “The Policeman's Beard Is Half Constructed”. What's the meaning of this? We were just looking at whether the machine is able to generate sentences which are grammatically correct. But sometimes they are very funny. One passage from the book is, look at this, it says, “More than iron, more than lead, more than gold, I need electricity. I need it more than I need lamb or pork or lettuce or cucumber. I need it for my dreams”. It does not make much sense. But this was the first attempt. What is the purpose of doing this? It has started from…

Innovations in literature, I will refer to stylometry especially. Stylometry is the author's unique style. It has been used, you see, in the modern and recent centuries to identify who the real author is. You remember once, it was a debate whether there even was somebody like Shakespeare and whether Shakespeare wrote his own work, or maybe Marlowe, or someone else wrote it. So that is the type of thing we are looking at, as we have in the morning sessions, that they look at the patterns and principles to identify the style. I just gave you one example of that. Dr. Fatima, in the morning, gave many examples. If you give it an appropriate prompt, prompt is important, then you will get the answer. In one study, a prompt was given. The first prompt should be that you ask the machine that do they know, for

example, Robert Burns or maybe Shakespeare? It says yes. You say, "Can you write songs in the style of Shakespeare"? Then it produces 176 songs. Shakespeare wrote maybe 44 songs. The machine produced, you see, AI generated, it generated 176 songs in the same style. Then, in the experiment that was given to students, they were asked to read and see which one appeals to them more. And of course, the results were, what do you think? The machine won, of course, over the human one.

Of course, that is one of the things they said that they will generate. But, to generate, the prompt should not be too open, vague, and broad. It should be the appropriate one. You also need to explain in a specific way… That in how many ways, or how many lines, are in what genre. But we have also seen that even the genres are mixing up. We are getting a new genre. Okay? Let's look at some of the things in humanities… It would be a good example, to begin with the Quran. You want to do research on a Quran Corpus? You will find all, word by word, Quran dictionary, English translation. Let's look. I'll take one of these and look at this, every verse has been taken and it has been analyzed. For example, it is "Bismillah rahman rahim", the first is the preposition, then the "ism" is the noun, and "Allah" is the proper noun. "Ar-Rahman" is an adjective and "Ar-Rahim" is an adjective. If you want to look at the themes, they will be in the form of clusters or clubs. For example, if it is a "kitab", it would be like a group. It would be the Psalms, and the Gospel, and the Torah, and others, which makes a cluster or group. Very good, isn't it?

Let's come to this one. You can upload your context for analysis. You can just see what it is, there are so many Corpora within this. One of the corpus is, for example, Shakespeare's one. You see Shakespeare's plays, you open it, now look at this. All the plays would come over here. There are dates and the visuals… It has been so simple. So the research has moved, focusing on one novel, one sonnet, one text. Now the research is doing, you see, what is in the whole corpus, and that's what… Look at the project news, on JSTOR, it will have all the texts of one century. There is another, Jane Austen's novels corpus, all the five or six novels of Jane Austen. You want to study the style of Jane Austen, the unique style of Jane Austen? It was just, I mean, the style of the century, all the contemporaries of Jane Austen were doing the same. So you can compare…

Okay, what are the future prospects? Well, as we have seen, what the people are doing, they have been doing that for many decades. Now we haven't been doing much. In fact, we are behind at least 20 years from the West. So what are the future prospects that we expect?

There will be enhanced natural language processing and automated literary analysis would assist in analyzing literary text: from their themes, their motifs, and their stylistic elements. Generated text models and data driven linguistic research… You will see that Generated AI will bring new patterns and new ways of research, rather than holding preconceived ideas. The second point, for the future, is addressing ethical challenges. In the morning, we heard that there are so many challenges and there is an ethical way around it. There is a danger of biases and even algorithms are created in a biased way, as we have seen from some of the

examples in the morning. If you ask DeepSeek, “Is Taiwan part of the United States?”, the answer, you could say, “Yes, certainly, it is, it is an invincible part of it”. So using that type of language, with such certainty, it shows that there is a bias. But if you ask ChatGPT it will give you a diplomatic answer, “It is not so simple… There will be different people who have different opinions about it.”

So, it leads to, you see, a dangerous thing. It means that even the algorithm and this type of ChatGPT could have a nationality, a national identity. The Chinese have Deepseek, and other nations will be trying as well. We might also have something like ChatGPT or DeepSeek, which will give us a national identity, like our Army. Okay, the third point, in the future prospect, we see is that there would be a role of interdisciplinary collaboration. People coming from different disciplines will be collaborating and developing joint projects to tackle, you see, some of the issues and challenges. Environment is a challenge, how can there be a collaboration? Environmentalists would say that we need to overcome this… There should be a solution. There would be money to spend on it, of course, but who is providing the money? For example, if you want to, in education… The people from education and other people from social linguists or sociology and there could be some cognitivists. There would be a government organization. The government here is the administration, the people who have the power. If they do not provide you the financing, if they do not provide you with the proper policy, you can't implement anything.

Okay, let's move to ethical considerations. In ethical considerations, there is a great concern about data privacy and consent. There have been many legal cases where there has been a breach of data and the people are asked… You see, you can not even do some things, which are free, without being asked for some information. Even for the students using Duolingo, they will ask you to give them your email address and your name and other data. If you give them that data, we do not know where they are going to use it. Okay, that type of ethics and that is just one example, there are many others like whether your data is safe or not, your consent has been taken or not. What about this Gen AI? It is producing the text, but who are the real authors? Have they been given any credit or not? Then there is a bias in AI algorithm, I've already given an example.

Then there comes the intellectual property issues. You see, Google and other companies have been misused. Especially some of the books in the music and publishing industry, the people have gotten a copy but that is really saturated… Then comes the impact of employment in creative fields, and creative fields mean how many books are now published and the music recorder, so it is related to that… I'll skip that one. Yeah, that is the important issue which I have covered and that is the last one that I want to do. That is how nobody considers this to be plagiarism. What is plagiarism? Plagiarism is the act of using works or creations from earlier, either human or digital systems, such as Generative Artificial Intelligence and so on, without proper attribution or permission, and presenting them either intentionally or unwittingly as one's own work. I think that in Pakistan, I have not seen anybody who considers this as plagiarism. Rather they think that it is their right as students, that they have found information and reproduced it. I have met many teachers and faculty members who have said that they have stopped students from using any of these tools because they just copy-paste. They have stopped giving them research assignments and projects like that. Even in exams, they just copy and reproduce, which is plagiarism.
That is why I was saying that if there is no policy on the university, or the department, or HEC, then people can use it as they like because nobody stopped them, it is not their fault. This is not the way, you see, to just use it, just take it. Presenting work created by Generative

AI without suitable acknowledgement is plagiarism and must be treated using the same principles and processes as plagiarism of a person. That is why, that anything which you have not created, that is out of you, you have taken from an email, you have heard from a lecturer, or you have read from a book, or a research article, which is out of you, you did not do it, there is a proper way to acknowledge it. Now I will give you an example of how it can be done. If you have used an AI tool, it would be exactly the same.

Who is the author in the beginning… Who will be the author, who should be given the credit? Well, that was in another context, but if you have used Open AI, you are giving credit in the same way as the reference. Open AI 2022, the author, date system, and then the title, ChatGPT, version, whatever version you have used, and then it is a computer program, and then you say available at, you have to give its URL, and then the date, whichever date you accessed. That will be at the end of the video, but how will you give in-text reference? So in-text citation will be figure one, that was AI in art, for example, figure one highlights a realistic visual simulation based on a range of textual prompts using an AI tool, say, mid January 2003. Okay, so if you have used that particular program, give its name, and also write, you see, the prompts you have given, how many prompts you gave, the first prompt was this, and the second one was that, and then, finally, you produce a version. Then you write its caption, place the caption for the image directly below the page, like this. It is synthetic, landscape, resources, mid-journey, and it is 2003.

And in the reference list in bibliography, it would go like this. So how many people have been using this? I have not seen even in your projects outside, that you produced, if there was any reference in your project. There were some projects… Yeah, but nobody has thought about what prompts they gave, and that was not one. If it was one, and you are using one program, and then that time you use another one, and then this other one, and what was the final? Anyway, we need to raise the awareness of the students that you can use it, but use it in an ethical way, by giving the proper references and giving the credits to the users.

Okay, so I thought I would do a kind of a SWOT analysis. This is the final one. What are the strengths in it, by the use of AI, and what are the weaknesses, what are the opportunities, and what are the threats? Well, in the strengths, you know that enhanced educational tools and resources make your learning interactive. They increase the efficiency of the students as well as the teachers, and the accessibility in generating educational material is easier. There is innovative research going on by using these applications, and we have found advanced linguistic analysis.

What are the weaknesses? There is a problem with the quality and accuracy concerned with AI-generated content. There is a danger that students would have over-dependence on AI tools which would kill their creativity. Then, of course, there is the issue of plagiarism.

What are the opportunities? Well, there is the potential for educational innovations and pedagogical integrations. There will be advancement in AI technology, which is for linguistic research, and there will be chances for global collaboration and access to AI tools for everybody. The Chinese have made it possible that it will be in every house and in every area because of its cheap and easy use.

What are the threats? There are the risks to academic integrity due to AI-generated content, and there will be technological… And its challenges in implementation. Well, at the moment, it seems that not everybody has got the same type of access. The people who do not have money are not using the paid version of it. They are at a disadvantage as compared to those who have paid for it. Then there will be some privacy and security concerns about handling the data. These are some of the threats, and the researchers are already paying attention to these areas to improve them and make them more efficient. With this, I end my presentation.

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