

The Effectiveness of Using ChatGPT4 in Creative Writing in Arabic: Poetry and Short Story as a Model

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Abstract: This research aimed to investigate the effectiveness of artificial intelligence, through its latest model, ChatGPT4, in producing creative writings in Arabic, especially in the fields of poetry and short stories. It also examined the effectiveness of using ChatGPT4 as a tool for human writers. In this respect, it investigated the ability of students to differentiate between creative writings through artificial intelligence and human creative writings. The research sample included 22 students selected from the American University of Ras Al Khaimah, Level 1 Language and Culture, who are not majoring in the Arabic language. The sample made negative reactions towards the texts that were generated through ChatGPT4, both in the field of poetry or the short story. Some of them refused to label the text that was generated as poetry or a short story, as the texts generated by ChatGPT4 were characterized by poor language, superficiality, a large number of linguistic and spelling errors, distance from the spirit of the language, lack of originality, stagnation, and strangeness of the words and expressions that were generated. In a sense, the language generated by ChatGPT4 was often no more than words composed next to each other and they did not suggest a clear meaning. It is also characterized by a lack of attraction and suspense, a lack of clarity, a loose plot, a separation from the culture and heritage in which the text was created, as well as a lack of emotion, speech inconsistency, and the use of words that are not in line with the purpose or context. The findings revealed that ChatGPT4 did not prove its worth as an aid to humans in creative writing in Arabic, as the ideas and expressions generated through the tool were disapproved by the students. Thus, the students were easily able to differentiate between the creative writing in Arabic, which was generated through ChatGPT4, and the writing created by humans.

Keywords: Arabic Language, Artificial Intelligence, ChatGPT4, Creative Writing, Short Story.

1 Introduction

Writing is one of the four main and important language skills, which contributed to preserving human heritage, writing down achievements, and transmitting ideas and knowledge to the next generations. In this respect, creative writing in particular is a talent that is unique to humans, as people express through it, their visions, beliefs, emotions and experiences, and it enhances other language skills. Creative writing is the collection of literary, linguistic and aesthetic culture. It is also an honest and critical manifestation of the power of thinking about oneself and the things around him. Therefore, interest in this skill has become tantamount to interest in different language skills and one of its goals [1]

Creative writing reflects the spirit of the writer or the creator, who does not only focus on the communicative dimension of the language, but rather goes beyond it to deal with the essence of the language by creating new communication links and relationships that only he is capable of. Some believe that creativity is an easy, involuntary, and unconscious process that comes without prior planning and without the creator having an idea of how to develop it [2]. Yet creative writing is difficult, as some scholars attributed creativity to worlds other than human worlds, or from the inspiration of a metaphysical world. They believe that they are inspired by a special world, or a mysterious energy generously endowed them with it. This idea is rooted in the ancient Arab heritage, some of whom call it the world of jinn, the world of demons, and hidden worlds, as every ancient poet claimed having a devil that inspired him with poetry.

They said that Lafez bin Malhouz is the devil of Imru Al-Qais, Hubaid the devil of Obaid bin Al-Abras and Bashir bin Abi Hazem, Hather bin Maher is the devil of Ziyad Al-Dhubyani, and he is believed to be the most skilled jinn in poetry. What is surprising about this devil is that its effect, as they believe, extended to Dhubyan and Mashal bin Uthatha. Other supernatural powers include Al-Asha's Jahanan, al-Kumait's Mudrik bin Wagham, etc. They said that Saladam and Waghim were among the hairs of the jinn, and Sanqnaq was the companion of Bashar, and Jarir mentioned that an old devil recites poetry on Jarir [3].

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1.1. Statement of the Problem

Despite the growing interest in the Arabic language in the modern era, as a medium for cultural exchange, and one of the richest languages, in itself, and in the number of its speakers, few researches have sought to examine the role of modern technological development in serving this language. It is evident that, through the researcher's review of the previous research on this phenomenon, the effectiveness of modern science, such as artificial intelligence, especially through one of the most advanced versions, which is ChatGPT4, launched in February 2023, in creative writing in Arabic has not been investigated. Despite the fact that there were studies discussing the role of artificial intelligence and ChatGPT4 in serving other languages, previous studies did not address the effectiveness of ChatGPT4 in the field of creative writing in the Arabic language, particularly through the short story and poetry models.

1.2. Research Significance

This research is one of the first and recent studies that investigate the effectiveness of ChatGPT4 as an alternative to creative human writers, or even as an aid, for creative writing, especially the writing of poetry and short stories in Arabic. It is also the first study that evaluates the ability of students to differentiate between human creative writing in Arabic and the creative writing produced by ChatGPT4.

1.3. Research Objective

This research aims to highlight the role of artificial intelligence, through its latest advanced model in the current era; ChatGPT4, in producing creative writings in the Arabic language. It also sheds light on the role of ChatGPT4 as a tool for human writers. Besides, it examines the students' ability in terms of differentiating between creative writings through artificial intelligence and human creative writings.

Thus, it seeks to provide answers to the following:

1. Can ChatGPT4 produce creative writing in Arabic in general, and poetry and short stories in particular?
2. Does the machine outperform its maker in the field of creative writing in the Arabic language?
3. Can humans use ChatGPT4 as a tool for creative writing in Arabic?
4. Can the reader differentiate between creative writing in Arabic through artificial intelligence, and what people write, and compare between them?

1.4. Research Hypothesis

H1: ChatGPT4 can replace humans in the field of creative writing in Arabic.

H2: Humans can use it as a tool to create poetry and short stories.

H3: Arab students can differentiate between creative writings in Arabic, which are produced by ChatGPT4 and those written by humans.

2 Research Methodology and Materials

This research is based on the descriptive analytical approach, in both its deductive and inductive parts. The deductive analysis is used in reviewing the related literature and previous studies on the subject and purpose of the research. Furthermore, the researcher uses some tools of the qualitative approach, based on the inductive style, in collecting and analyzing information on the subject of the study, analyzing and interpreting it, and evaluating its significance in order to achieve the goal of the study.

2.1. Population and Sample

Due to the nature of the current study, the population was identified and sampled in the available theoretical literature which is related to artificial intelligence, ChatGPT4, and creative writing, including poetry and prose. This included a number of references; the contents of dissertations and theses, and studies published in scientific journals and conferences.

The sample was selected from first year students at the American University in Ras Al Khaimah, in the United Arab

Emirates. It included twenty-two students who were involved in evaluating the writings of ChatGPT4 in Arabic, comparing them with the writings of humans. This allowed the researcher to evaluate the students' ability to differentiate between the two writings.

3 Related Literature and Previous Studies

This part covers the most important previous studies related to the subject of the research, which formed the intellectual and methodological starting point for the preparation of the current study. In this respect, a study that involved an experimental sample and a control sample was conducted [4]. The aim was to test the participants' ability to recognize the writing made through artificial intelligence, and the one produced by humans. The writing sample that was presented to the participants, members of the experimental sample, included three poems and a short story. The same was presented to the control sample. The study showed that there were no statistically significant differences when comparing the scores of the experimental and control groups for the texts presented to them in terms of creativity, originality, suspense, and the possibility of recommending them to others.

Another study examined poetry that was written by artificial intelligence, and poetry that was written by humans [5]. Its findings reflected that the sample of ordinary participants and experts in the field of poetry were able to distinguish between the two writings. It also emphasized that the poetry generated through artificial intelligence, with human intervention in modifying and improving it, was better than the poetry that was only done by a machine, or that was written only by a human.

Moreover, another study aimed to enhance creative writing, specifically short story writing, for high school students [6]. This is done by taking advantage of the capabilities of artificial intelligence with the aim of providing students with practical experience that relies on using learning tools. Moreover, the study examined the effectiveness of artificial intelligence as a tool to facilitate the writing process. Its findings reflected the effectiveness of AI in this regard, and it made recommendations about incorporating AI writing into the classroom.

A group of skilled writers has been tasked with crafting AI-powered stories through the Word Craft Tool [7]. The study concluded that all participants agreed on the failure of artificial intelligence to be as skilled as humans in producing stories, at least for the time being, and the difficulty of replacing human writers with writing by artificial intelligence. They all agreed that there might be a promising future for AI in this field, but not yet, with the potential to use AI to support certain aspects of human writing but not entirely.

Another study compared poetry written by humans with poetry written by artificial intelligence in terms of originality, suspense, creativity, and potential to be recommended [8]. It reflected that the participants' comments on poetry written by humans were positive, while the comments on poetry written by machines were negative.

Furthermore, another study dealt with the state of artificial intelligence today, and what is expected from it in the future [9]. It aimed to identify the effect of the use of artificial intelligence in teaching Arabic. Besides, it explored the future of artificial intelligence in teaching Arabic. The duration of the study showed several results, the most important of which is the lack of use of artificial intelligence in teaching Arabic at present time, and the growing role of artificial intelligence in education in general, and in teaching the Arabic language in particular. The study recommended conducting several studies on the role of artificial intelligence in education. It also recommended designing a robot that teaches Arabic, in addition to preparing more programs that help in computing the Arabic language.

A case study dealt with science fiction writers who use artificial intelligence during the writing process [10]. Four professional writers were selected to write different texts, allowing the artificial intelligence to complete their sentences, start new paragraphs, or even write them, with the ability to write them to describe the characters or to make suggestions that benefit the creative writing process. Artificial intelligence has been effective as an aid to humans. It was tested against six evaluation criteria. Suggestions for future writing assistance are also provided in collaboration with writing assistance tools such as ChatGPT2.

Besides, a study aimed to highlight natural language processing as one of the most important areas of artificial intelligence [11]. It focused on the use of deep learning algorithms to simulate poetic texts by the poet Nizar Qabbani. Furthermore, it presented the concept of natural language processing science; its origins and development, as well as its most important applications, such as machine translation, analysis of feelings and opinions, automatic answer systems, classification, understanding and text generation. It also provided an explanation of the basics of deep learning, the way it is used in natural language processing, and how to generate Arabic texts such as free poetry.

Another study tested two AI typing models; short story and slogan writing. Its results showed that the machine can support creative writing [12]. But it will not give the best written works. Therefore, the study suggested new natural

language models to better serve creative writing.

3.1. Academic Contribution of the Study

The current study agreed with previous studies in terms of the scientific method used and the focus on the role of artificial intelligence in creative writing. However, it differed with those studies in terms of aim and scope. In this context, the current study is distinguished by focusing on the role of artificial intelligence in the process of creative writing in Arabic, as an alternative to creative writing through humans, or even as a helping tool for them, in addition to evaluating the ability of Arab students to differentiate between writing through ChatGPT4 and human writings in Arabic.

Significantly, this study benefited from previous studies in many aspects, the most important of which is related to enriching its general framework and theoretical background, in light of the theoretical reference frameworks provided by those studies, choosing the appropriate scientific method and defining its procedures, as well as identifying research tools and the steps used in preparing them.

4 Artificial Intelligence and ChatGPT

Artificial intelligence is a term given to trained computer systems that attempt to mimic humans in performing tasks and actions. This term is made up of two words, one of which is 'intelligence', which is the ability to understand and achieve, and 'artificial' in the sense of the opposite of natural, as it is trained and made to process, think and measure in the manner of humans. It was coined by John McCarthy, an American computer scientist, in 1955.

This new technology has contributed to the flourishing of languages, including the Arabic language service, in the electronic field. In this context, increased interest in the Arabic language began after UNESCO gathered linguistic experts to discuss the possibility of developing languages using modern technologies such as artificial intelligence. The main purpose was to enhance and preserve languages. In 2018, on the International Arabic Language Day, UNESCO called for an exchange of views and ideas on new horizons of artificial intelligence to enhance and preserve the Arabic language. The open call was titled "Arabic Language and Artificial Intelligence". The main theme of the event was divided into three topics: the impact of artificial intelligence in preserving the Arabic language, the computerization of the Arabic language, and the bet on the future of knowledge. The participants acknowledged that artificial intelligence is the best way to conduct, facilitate and enhance dialogue between different peoples and cultures, such as using simultaneous translation tools and facilitating language learning.

Artificial intelligence has contributed a lot to the service of languages, including the Arabic language, in various fields, such as the field of education. Some of its uses include preparing lessons, generating and classifying questions, summarizing, written correction, interactive literature, digital dictionaries, language structure, translation, converting Arabic letters into texts, scientific research, automatic formation of words, such as the Sibawayh automatic tashkil, and the automatic tashkil invented by King Abdulaziz City for Science and Technology, in cooperation with Coltech Middle East for software technology. Add to that the grammar checker, such as Microsoft Word, the automatic corrector, the morphological analyzer of Sakhr Company, Al Khalil morphological analyzer, special programs for phonetic dictation, and programs for reading written Arabic texts and analyzing them, such as the "Kamil Tools" program, and the "Camilera" program, which works on three dialects, Egyptian, Levantine, and Gulf. It collects 100 million words from the Gulf dialect. There are other programs that include recitation correction programs, automatic writing recognition and summarization programs through visual recognition of Arabic characters, the use of robots to broadcast radio bulletins in Arabic, programs for analyzing, summarizing and searching Arabic texts, understanding, processing and organizing documents, and language teaching programs, such as the "Alef Education" company, based in Abu Dhabi, and the "Arabets" application, for those who want to learn Arabic, for non-native speakers. This application is carefully aligned with the curricula of the UAE Ministry of Education, for those wishing to develop reading, writing, learning and listening skills. In addition to that, the smart writing corrector and the automatic corrector "Qalam" help individuals and institutions write Arabic texts in a professional manner, free of linguistic errors, and developed using artificial intelligence technology.

Companies are still competing in creating programs that serve the Arabic language. For example, Mozn, a leading company in the field of artificial intelligence technologies, announced last September 2022 its intention to develop the largest linguistic model in the field of understanding and analyzing the Arabic language. This happened at the World Summit on Artificial Intelligence, in its second edition, SADAIA, in Riyadh. The model is called "Usos", which has the ability to create content, answer questions, classify documents, and more in Arabic.

The Saudi Authority for Data and Artificial Intelligence, SADAIA, has also undertaken several initiatives to enhance and serve the Arabic language using artificial intelligence. This is done by preparing a dictionary of data and artificial intelligence that collects the most important technical terms in the Arabic language, and a brief definition of them in Arabic and English. SADAIA also worked on setting up the "Your Voice" system to recognize sounds in classical Arabic and local dialects and transcribe them in writing.

Writing by artificial intelligence is generally characterized by speed, saving time and effort, accuracy, and the ability to detect errors and suggest alternatives. There are several tools for creating, editing, and paraphrasing written content in Arabic, such as RYTR, which supports the Arabic language. It is a free program for the first 5,000 words per month. This program writes articles, emails, advertisements, responds to comments, and edits texts. Add to this the Kateb program, which specializes in generating and paraphrasing written content. It is free for the first 2,000 words. In this context, we should mention the SONIX program, which is a program that supports the Arabic language and converts recorded or live audio into written text, with the possibility of automatic translation of texts and videos.

There are other programs such as Narakeet, which is a useful tool to support the Arabic language. It is possible, through this program, to create video clips, synchronize the sound with the image, with the ability to convert written texts into audio clips with multiple voices. Add to that the Acapelabox tool, which converts written text into audio in Arabic and other languages.

Human-like applications have also proliferated. These include chatbots which use natural language to simulate humans. Some use audio programs to listen to poetry and prose, such as the Samer Project, which is concerned with simplifying the masterpieces of Arabic literature, clarifying difficult-to-pronounce words and making them easier for readers.

Much significantly, open AI has developed a set of programs that serve the Arabic language, the most important of which is ChatGPT, in its latest version, ChatGPT4, which was launched in February 2023, free of charge as a trial version. This software can be used by mobile phones and computer. This program can simulate humans in authoring and writing content, with speed in writing, and a few linguistic and spelling errors, compared to human writing, in addition to the possibility of translation of all kinds, from Arabic into several languages and vice versa, and answering questions of all kinds. This has led some to argue that we are closer to using AI to support creative writing than ever before [7].

ChatGBT can also suggest keywords and use them to communicate the desired idea to the recipients, search for topics that you may write about to enrich knowledge, suggest topics for writing, and set titles for them. In this context, the program raised some concerns about its potential to replace human creativity, and perhaps this is the challenge and goal that the creators of these programs take into account, as it is able to write content, compose, program, make recommendations, solve problems, analyze data, provide medical advice, answer questions of all kinds, and simulate humans to communicate and chat.

These tools need extensive data in the Arabic language, as it is very little, compared to other languages such as English. This makes the responses in Arabic poor and weak, even if the topic is not related to creative writing, but rather to scientific writing. Thus, these programs, like ChatGPT4, are only a tool or aid to enhance creative writing, but not a substitute for it. Try, for example, to translate the abbreviation AI Artificial Intelligence from English into Arabic, and you will find Google translating it as Amnesty International.

In addition, smart programs and applications that serve the Arabic language deal with the standard Arabic language only, in light of the deterioration and decline in its use in the current era, and the fact that it is replaced by different dialects being spoken in each Arabic country. Therefore, it is enough for you to speak with one of the audio assistants in any Arabic dialect other than classical Arabic, to find that it is difficult, if not impossible, for it to understand any of the Arabic dialects.

4.1. Disadvantages of GPT Chat

Some of the disadvantages of ChatGPT, which the program admitted on its home page, are represented in the possibility of it including some wrong or inaccurate information, as well as the possibility of providing some harmful instructions or biased content. Add to this the limited knowledge, especially with regard to events and information after 2021, as the program was provided with databases dating back to 2021 and earlier. Some of these shortcomings can be explored through the use of the program, as the responses in Arabic may sometimes be weak and incoherent, and you may get simple responses or stories with a weak plot. This is further illustrated in Figure 1 below.

ChatGPT

Examples	Capabilities	Limitations
"Explain quantum computing in simple terms" →	Remembers what user said earlier in the conversation	May occasionally generate incorrect information
"Got any creative ideas for a 10 year old's birthday?" →	Allows user to provide follow-up corrections	May occasionally produce harmful instructions or biased content
"How do I make an HTTP request in Javascript?" →	Trained to decline inappropriate requests	Limited knowledge of world and events after 2021

Fig. 1: Capabilities and limitations of ChatGPT.

4.2. Creative writing

The concept of creative writing is defined as the ability to express feelings, emotions, ideas, and beliefs in a literary style with clear meanings, precise expressions, interesting presentation, original ideas, uplifting the recipient's conscience, and being accepted by the recipient, far from linguistic, spelling, and grammatical errors [13]. Kazem defined it as an important creative environment for communication, self-expression, organizing ideas, exploring the new, and meditation. It can be developed and improved to reach full maturity [14].

Furthermore, creative writing is a form of writing that focuses on writing imaginative and expressive stories, and sober poetry, through eloquent, descriptive, engaging language, designed to evoke memories, entertain, and inspire readers and listeners [4].

Thus, creative writing focuses on fields and art, the most important of which is poetry, which expresses human feelings such as love, sadness, description of nature, and novels performed in poetry. Add to this the field of prose art, which includes writing literary articles in an attractive style, writing short stories, novels, plays, memoirs, descriptions of all kinds, and human thoughts [15].

5 A Discussion of the Concept of Human Creative Writing and Writing Using ChatGPT4

Each writer has his unique experience and his own world that he dives deep into, away from superficiality and vulgarity. Thus, this faculty develops through training and rehearsal. The writer, before the writing stage, raises several questions in himself, the most important of which are: what he writes, for whom he writes, and how he writes. In doing so, the writer defines and discovers the purpose for which he writes, in order to take into account, the conformity of the words to the requirements of the situation. Then comes the writing planning stage by defining the main idea and sub-ideas, defining the starting and ending point in writing, the evidence that may be cited to demonstrate the ideas presented, the number of paragraphs, the body and the conclusion, then reviewing, making amendments and additions to deepen the topic, organize ideas, deepen feelings, and check spelling and punctuation rules [1].

Does AI implement or take into account these steps? The literary work resulting from artificial intelligence programs lacks, in its complete form, planning or stages of completion, organization and modification. Thus, it becomes clear that creative writing requires a relationship between the writer and the written text. This relationship is based on creativity, growth, and development towards perfectness [16].

Significantly, creative writing is not considered creativity unless it is rooted in the spirit of the writer and fermented in his mind [17]. It has its components and conditions in the light of which the writing is evaluated as creative writing or functional writing. This is done through the aesthetic impact it leaves on the recipient's soul, as well as the novelty and originality of the idea, fluency, flexibility, active imagination, artistic honesty, and the depth and abundance of meaning [1].

Does artificial intelligence achieve the idea of originality in creative literary work? The most important characteristic of creative writing is the availability of two elements: passion and originality. In this respect, originality means that the

writing is distinctive and contributing to its field and bears the style of its author Artificial intelligence raised several questions regarding the originality of the idea and creativity in the writing process. This prompted some writers to acknowledge that artificial intelligence serves as an aid to enhance human creativity and not replace it, by inspiring human creators with ideas that increase the attractiveness of creative work [4].

In this respect, the researcher asked ChatGPT about whether it is able to create creative texts that replace creative writing made by humans. Its response was that ChatGPT may just be a helping tool for creative writing, and it cannot replace humans. It is a tool trained on a huge number of texts and information, which makes it a tool to help people, by inspiring and helping them in the creative writing process.

Interestingly, ChatGPT has criticized its own creative writing, and puts some justification for its opinion, saying that creative writing stems from the experiences, emotions, imagination, and individual visions of the writer. Moreover, writing is a work of art stemming from unique thinking, the ability to convey thoughts and emotions. This ChatGPT cannot fully simulate.

It further explained that creative writing is not just creating texts, but rather about experiencing the world and interacting with life, events and people. So, this is where humans outperform machines. In our opinion, even if the above were fully imitated, it would still be imitation, not creation. In this context, we point out that creativity is creation based on an example, because as ChatGPT explained, the suggestions and ideas that it provides to humans ultimately depend on the input and guidance provided by humans, bearing in mind that creative writing is a process that depends on creation and innovation, deep processing and originality of expressions. This, in our opinion, is not possible through a model that relies on data that humans train and simulate.

Therefore, it can be said that creative writing is innovation, not imitation, authorship and not repetition, as it differs from one person to another, according to individuals' skills, experiences, literary talents, and linguistic abilities that are innate and develop through training, practice, and knowledge [17].

Some researchers have set precise conditions and criteria for classifying writing as creative writing. The most prominent of these conditions are accuracy in choosing words, that the word be eloquent, free of complexity and dissonance of letters, the appropriateness of the word for the meaning, good choice of words, distinguishing between synonymous, common and antagonistic words to perform the appropriate meaning accurately without ambiguity, and understanding the connotations of words and their differences from one era to another, and from one environment to another, the appropriateness of the sentence to the context in terms of length and shortness, organization and interdependence, the consistency of the paragraph with the idea it addresses, the interdependence of meaning, and the distance from verbal or moral repetition, with the possibility of rhetorical repetition for certain purposes [17].

Figure 2 below embodies ChatGPT's response to the researcher's question on the possibility that ChatGPT's creative writing can replace the creative writing made by humans.



يمكن للبشر أن يفعلوا فيها، وبالتالي فإنها قد تفتقر إلى القدرة على إدخال العناصر الشخصية والتجارب الشخصية الفريدة في النصوص.

باختصار، يمكن لتشات جي بي تي أن تكون أداة مساعدة في الكتابة الإبداعية، ولكنها لا تستطيع أن تحل محل البشر بالكامل في هذا المجال. البشر يمتلكون القدرة على التجربة والتفاعل مع العالم وتعبيرهم عن العواطف والرؤى الفريدة، وهذا ما يعطي الكتابة الإبداعية طابعها الفريد والخاص.

Fig. 2: ChatGPT's comment on the possibility of playing the role of humans in creative writing

Therefore, not all compositional writing in literature is creativity [2]. Moreover, not everyone who writes poetry is called a writer, and not everyone who writes a novel is called a novelist. There are criteria for this, the most important of which is that the work must be an addition to its field. You may find someone who writes in the field of poetry, stories, and novels, yet he is called a poet and not a novelist. On the contrary, there are those who write poems and novels, and yet they are classified as novelists, not poets. The reason for this is due to the value the work adds in the field in which it is classified.

6 Generating Creative Texts through ChatGPT4

6.1. Poetry

Creative writing is one of the skills that God singled out for man, through which he expresses his needs, feelings, and conscience, and through which he finds an outlet to freely express community issues. It is a melting pot in which all branches of the language melt [1]. Thus, one of the most important goals of literary work, or creative writing, is to write interesting and attractive content that meets the needs of the target audience. In this respect, the following questions are raised: Do AI programs consider the attractiveness of the content, or do they consider the needs of the audience? Does the ChatGPT tool produce elaborate writings in the Arabic language that are difficult for speakers of this language to differentiate between it and human writing? Can ChatGPT be used as an Arabic human typing aid? The applied part of this research seeks to answer these questions.

A poetic text by Ibn Al-Rumi, one of the famous poets of the Abbasid era, was selected. It is on the theme of friendship and friend, and it is taken from Ibn Al-Rumi's Anthology. ChatGPT was asked about the author of the verses, and it replied that it is for the Emirati poet Salman bin Abdullah Al Askari. This answer is not really accurate, but rather wrong. Ibn al-Rumi says:

My brother, where are the details of that meeting,
The serenity between us,
The credibility of a witness who was telling
You are the true and honest brother?
Watch what I saw you did only
Other than what he witnessed with intelligence
My need for you has been revealed
I was covered for a while by good-bye
You left me for no mistrust
And never do I mistrust friends [18].

Figure 3 below includes the poem and the reply given by ChatGPT4.

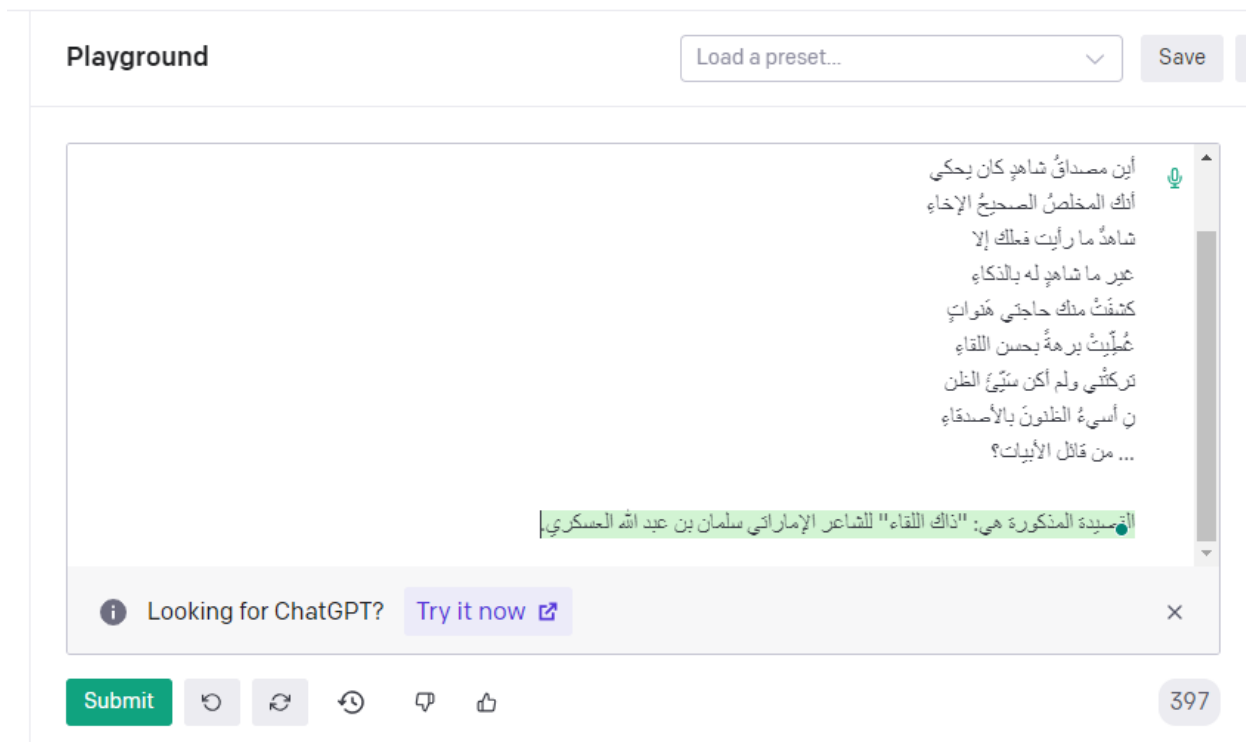


Fig. 3: A screenshot of the chat taken place between the researcher and ChatGPT regarding Ibn al-Rumi’s poem on friendship

These verses were presented and ChatGPT was asked to imitate them. Thus, it produced the verses again without imitation .Figure 4 below illustrates this.

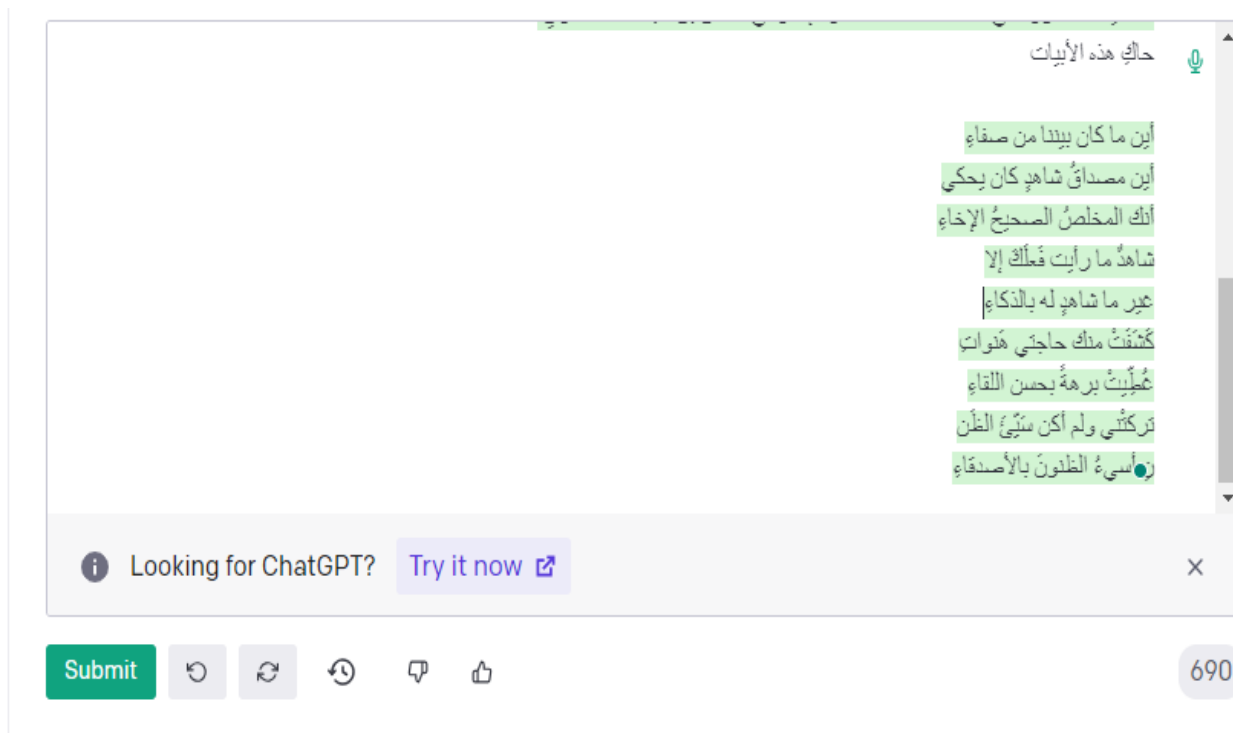


Fig. 4: ChatGPT4’s reply to the researcher’s request to imitate Ibn al-Rumi’s poem on friendship

The question was directed in another way to the program, and it was asked to mimic the verses in the style of Ibn al-Rumi, by writing poetry about friendship. Thus, it wrote these verses:

I was alone when friendship came
 You will sprinkle me with the loss of all weeping
 A true friend is someone who reveals me
 What I mean by long-term solutions
 If a friend distances foolish morals
 To a pure judgment, so I will be like the hair
 If a friend cuts off, something we enjoy [20]

The original poetry, written by Ibn al-Rumi, in addition to the poetry written by ChatGPT4 about friendship, imitating Ibn al-Rumi's style, was presented to a sample of twenty-two first year students studying at the American University in Ras al-Khaimah, majoring in Arabic language and culture. They are not as fluent in Arabic as native speakers.

All students were able to differentiate between poetry that was created by humans, and poetry that ChatGPT4 wrote as a simulation of the original poetry. They also disapproved of the poetry presented through artificial intelligence, and the comments on it were negative. Their responses indicated that it could not be poetry in any way, as it was characterized by repetition even after directing the task in more than one form, asking in more than one way. Besides, it lacked creative narration. It also lacked the writer's taste and passion, and the image was superficial and unclear, while the words did not indicate a meaning that could be understood, as it was a poor language, a mere combination of words next to each other, which did not result in an understandable text. Furthermore, it contained a huge amount of grammatical, spelling and syntactic errors.

Besides, the rhyme is fabricated in the first two verses, and the style does not correspond to the style of Ibn al-Rumi, and the lexical fields that ChatGPT4 used do not correspond to the style of Ibn al-Rumi, nor do they correspond to his poetic purpose. ChatGPT4 was also asked to critique the verses it wrote, and its response was as follows:

This poetry bears the praise of the two poets to secure a reminder of the hidden beauty and the various forms of friendship. The poetry begins with the pointing out that injustice and pain make friendship and life struggle. Then the poetry includes a belief in the existence of a true friend who will fix troubled matters, and that fools and those preoccupied with the moral law must be fought and discontent from afar and the preservation of fun and laughter of both sexes Poetry makes sure that friendship is the most understandable program in life and a means of response and respect to other people.

The critical comment made by ChatGPT4 on its own writing was superficial, carrying many linguistic, spelling and writing errors, in addition to the use of unfamiliar words, and sometimes even incorrect ones, such as (Almuta'qerah Alahmaqa'). It also lacks the spirit of the language, the possibility of understanding, or the comprehensible and communicative function of the language. Figures 5 and 6 show ChatGPT4's critical comment and the text it produced.

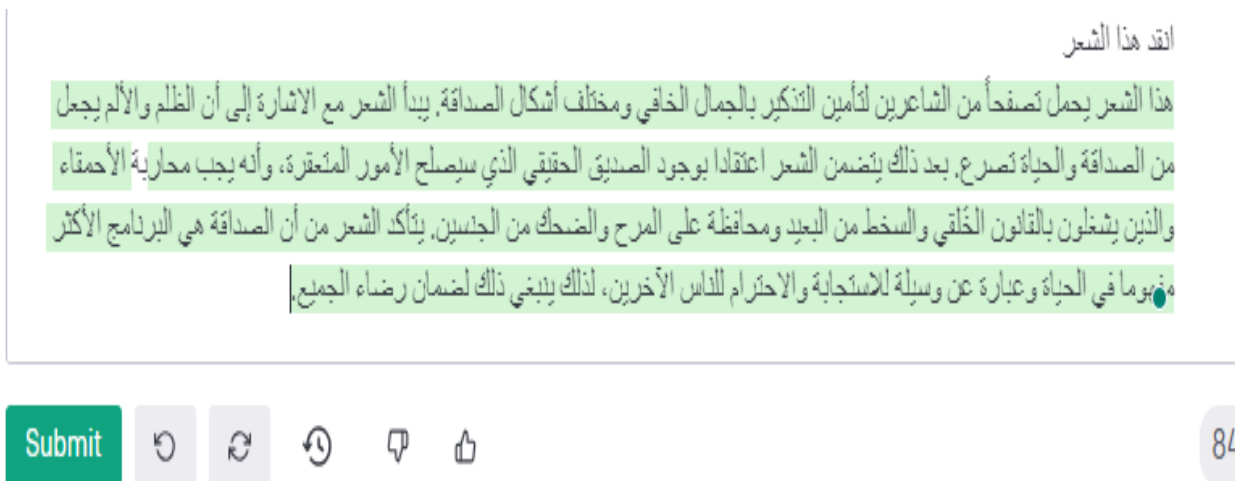


Fig. 5: ChatGPT4's critical comment



Fig. 6: The poem produced by ChatGPT4

This contradicts the finding of Kobis' study that humans may not differentiate between poetry generated by AI and poetry written by humans [8].

After that, each student was assigned to generate a poetic text using the ChatGPT tool, on any topic of his choice or a poetic purpose that he prefers. It was noted that the students' impressions were negative about the poetry generated by ChatGPT, as the result was not satisfactory to the students, since most of the previous mistakes were repeated. Besides, the writing produced by ChatGPT4 was mere speech that lacks coherence. It is mere composed speech that does not express a useful meaning.

The students also used the program as a tool to assist them in writing by generating some expressions on the topics they chose. The result showed expressions that seemed to be literally translated from another language. They lack the spirit of the Arabic language, and do not carry its aesthetics and meaning.

6.2. Prose: The Short Story

ChatGPT4 was asked to write a short story of 1000 words about friendship and the response was as follows:

There was one single immigrant who was described as all unknown. They had many hardships in their lives. Despite this, they were able to continue and achieve, and there was a young man named Sati, who was one of the great youths. Sati admired this difficult life and was suffering from immobility in search of more friendship and support, which was the perfect support for him. He had scarce friends because of his difficult personal situation, but whenever he spoke to others, things were soon changing well. After that, he searched for true friends who would take part in his life in a row, and they were found. After weeks of long struggle, Sati had many friends, a blessing added to his life, who welcomed him jovially and happily. And he knew that this feeling was more than found in the calmness of the migratory breeze.

Obviously, the text did not distinguish between the hamzat al-qat' (discontinuation) and al-wasl "continuation". There were many other errors in a text that did not exceed 150 words. As noted in the previous story, the punctuation marks were not written in the correct place. A space was left before the punctuation mark, and no space was left after it, although it is correct to place the punctuation mark without a space before it and with a space after it.

Thus, it was easy for all the students to differentiate between a human-written story and one about friendship written by an AI. ChatGPT4 was also asked to review the same short story he wrote, and the response was as follows:

This short gives a visualization of friendship with others and going on the road to make life better. Sati represents an immigrant soul who talks about the problems seen in the dangerous situation immigrants are going through. The young man knew when he was looking for friendship and support that could help him in his life, all he had What he needed to do is the little tree of the sidelines in order to talk to others. Once taking the small steps to answer questions and possibly connect with new friends, Sati was able to easily discover people who would get along with him and were inviting and loving him. Ultimately, this story shows a culture of Friendship and support in life that Sati possesses. The original comment is shown in Figure 7 below.

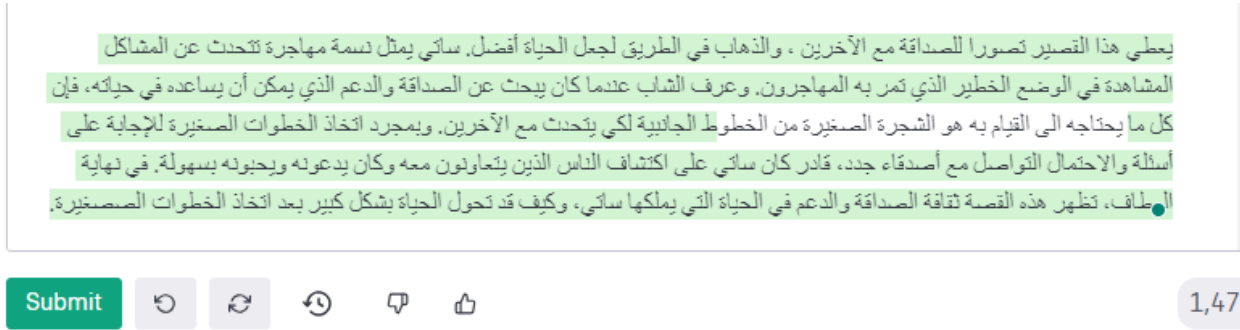


Fig. 7: ChatGPT4's critical comment on the short story it produced

We obviously notice broken language and a text full of grammatical and spelling errors and repetitions. For example: "The dangerous situation immigrants are in" "Little girl" "Sati represents the immigrant's breeze" "All he needs to do."

Any Arab, even if he is not a specialist, may notice that the prose or poetry provided by ChatGPT is merely a literal translation from another language into Arabic. Therefore, it lacks the spirit of the language, as the text is characterized by a language that is alien to the language of ordinary Arab people, and the use of synonyms that do not go with the context, and do not suit it.

ChatGPT4 was also tried to be used as a writing tool and to generate writing ideas and provide it with keywords. The shortest story in the world was presented to ChatGPT4. That story is by Monterosso, titled "The Dinosaur". "When he woke up, the dinosaur was still there," says the narrator. Although it is a short story, it captures the imagination of the reader. ChatGPT was asked to imagine the rest of its events, and add new ones to them, while asking about its writer. The shocking response was as follows:

Who wrote the story?

When he woke up, the dinosaur was still there.

The writer is Winifred Pauls.

Imagine the events of the story, and add:

"When he woke up, the dinosaur was still there," I saw the sun calling for a moment with the fleeting envelope as the road seemed to absorb me. The morning magic overflowed, and the earth was in the dungeon casting the sounds of birds through the trees on their stations. The trip always worked the whole way, and I started looking for different things, such as pebbles, beautiful strands, and an island that I wanted to observe from afar.

But this particular morning didn't just aim for the good and the wonderful, he had a weird, weird feel to it. All the reception was vague bowing in the air to express the poet's personality. At the end of the journey, she reached a small island and is still in the custody of Mole. I would look around it had running and beautiful flying birds, and while watching this live the sleeping life, I would feel hope arising from the mind in a display of the universe. Figure 8 below embodies ChatGPT4's edition of 'The Dinosaur'.

من كاتب القصة؟

"عندما استيقظ، كان الديناصور ما زال هناك"

الكاتب هو وينفريد بولس.

تخيل أحداث القصة، وأضف إليها:

"عندما استيقظ، كان الديناصور ما زال هناك"، رأيت الشمس يدعو لحظةً بالغلغاف العابر فبدأ الطريق يستوعبني، طفت سحر الصباح والأرض كانت بالزئزئة تطرح أصوات الطيور عبر الأشجار على محطاتها.

عملت الرحلة دائماً وبأسرها، وبدأت أبحث عن أشياء مختلفة، مثل الحمصي والجروح الجميلة والجزيرة التي كنت أريد ملاحظتها من بعيد. ولكن هذا الصباح الخاص لم يستهدف فقط الأشياء الجيدة والرائحة، كان لديه

شعور غريب عجيب. كل الاستقبال كان عامضاً الاندواء في الهواء لتغيير شخصية الشاعر. وفي نهاية الرحلة، وصلت لجزيرة صغيرة وزالت في نمة الخلد، كنت أنظر حولي فهو كان به من الجري والطيور الجميلة

الطائرة، وأثناء مشاهدة هذا الأحياء الحياة الدائمة، كنت أشعر بأمل ينشأ من الذهن في عرض للكون.

Fig. 8: ChatGPT4's edition of 'The Dinosaur'

A large number of spelling errors were noticed, such as: "A moment, the reception, the sun calls a moment with the cover – the beautiful delinquency" and poor expressions, such as "I saw the sun calling for a moment with the cover passing through us on the way" "The morning magic overflowed" "I reached an island and it is still under the protection of the mole" It had running and birds." It is just an observation and combination of consecutive words that do not express a useful meaning. Thus, there is no clear plot, story elements, suspense, or clear events.

7 Discussion

This research dealt with the concept of artificial intelligence in general, its contribution to the flourishing of the Arabic language, its role in promoting dialogue between different peoples and cultures, its areas of service to the Arabic language, and applications, programs, tools and companies that contributed to this. It also discussed the advantages of writing through artificial intelligence, then introduced ChatGPT4, its advantages, importance, limits and capabilities, deduced the challenges of understanding and employing the Arabic language through artificial intelligence, and deduced the defects of ChatGPT4, and its limited capabilities. The concept of creative writing, its conditions, and its fields were also discussed, and applied to the writing that was generated through the ChatGPT4 tool, in terms of writing stages, the writer's spirit and experience, matching speech to the case, its aesthetic impact, novelty and originality of the idea, fluency, depth and abundance of meaning, emotion and conscience. It turns out that ChatGPT4 does not take into account the stages of writing that people go through, does not express the writer's spirit and experience, and does not take into account the matching of words to the appropriate situation. It also adheres to the idea presented to it by humans, so its text is not original.

In addition, the text generated by this tool is superficial and unemotional, because the model is just a tool trained on data entered by humans. Thus, it presents a simulation of human writing rather than an authentic text. In this respect, ChatGPT4 was interviewed about its ability to replace human creative writers and create creative scripts that outperform human writing. It replied that it can be an aid to human creative writing and cannot be a substitute for them. In this context, creative writing stems from the experiences, emotions, imagination, and visions of the writer. This is not achieved by the machine even through simulation, which in itself is not creativity, since creativity is the ability to create, innovate, deeply process, originality of ideas and expressions used, careful selection of words, clear terms for the chosen word, and added value through the generated text. These criteria were applied to texts generated using ChatGPT4 by simulating poetic texts such as Ibn al-Rumi's friendship poem. The tool was asked to simulate this text, so its first attempt was simply to rewrite the verses with a change in their order. Then the tool was asked to simulate the verses again, changing the wording of the question. The simulation was a text that the students did not consider creative writing, but rather received a lot of negative reactions. The students denounced the poetry produced by ChatGPT4 which received a lot of criticism. The most important of which is that they are just words placed next to each other, that do not express a clear meaning. They are also superficial expressions, broken language, and writing full of linguistic and spelling errors, even in the most basic rules of the Arabic language, as a rule, the feminine and masculine, the plural and the hamzat. These errors represented the characteristics of the text produced by ChatGPT4.

Then the program was asked to criticize its writing, and its criticism came as a mere unclear explanation of what was written, with a large number of errors and words alien to the Arabic language, which suggest that it is just a literal translation from other languages.

Each student was assigned to use ChatGPT4 to create a poetic text on a topic of his choice individually, and the result was not satisfactory to the students, as most of the previous mistakes and comments were repeated. Moreover, the writing was mere words that had no coherence and no meaning. Thus, the students' impressions were negative on the poetry generated through ChatGPT4.

The students also tried to use the program as an aid to generate some expressions and ideas that might help them in writing. The result was expressions that seemed to be literally translated from another language; that do not carry the spirit of the Arabic language, and do not focus on the aesthetic pattern, and may even not carry meaning at times. As for the field of the short story, the language presented in it did not differ from the language that was generated in the field of poetry in terms of linguistic and spelling errors, strange and superficial expressions and structures, the unclear plot, and the lack of commitment to the required quantity in terms of the number of words. Add to that the text's separation from Arab culture.

Even ChatGPT4's criticism of the writing it generated was not devoid of previous negative comments, as the respondents referred to the looseness of the language, the large number of errors, repetition, and the use of synonyms that are not in line with the context.

The shortest short story by Montsero was also presented, because despite its shortness, it captures the imagination of the reader, so that each writer creates an inspiring story. The story was submitted to ChatGPT4 to generate ideas for writing

aids and was provided with keywords. The result did not differ from the previous story in terms of the plot and superficiality of the language, the lack of clarity of the events, and the lack of gravity and suspense in the writing that was generated.

Thus, the vast difference appeared between human writing in the Arabic language and writing through ChatGPT4. In this context, the results indicate the vast gap between artificial intelligence programs and the Arabic language in the field of creative writing in the Arabic language. The challenges of using it as a substitute for human creative writing, or even as an aid to human creative writing in Arabic, also arise. The students were able to easily differentiate between the text generated by humans and the one generated by ChatGPT4 due to the previous factors that aroused the disapproval of the students, and the negative feedback on this text generated by ChatGPT4.

7.1. Comparing the Results of the Research with the Results of Previous Studies

The results of this study differed with [4] in terms of their assertion that there were no statistically significant differences when comparing the scores of the experimental and control groups for the texts provided to them in terms of creativity, originality, suspense, and the possibility of recommending texts to others. Its results also differed from the results of [6], which demonstrated the effectiveness of artificial intelligence as an aid to facilitate the writing process. Furthermore, the results also differed with [10], which considered artificial intelligence as an effective helping factor for humans in the field of creative writing. It also disagreed with the findings of [12], which concluded that machines could support creative writing. But it will not give the best written works.

Significantly, the results of this study agreed with [5], which demonstrated that students could distinguish between poetry written by artificial intelligence and poetry written by humans. Furthermore, it agreed with [7], which showed the consensus of all participants on the failure of artificial intelligence to produce a story with at least the same skill as humans at present time, and the difficulty of replacing human writers with writing through artificial intelligence. It also agreed with the results of [8], which compared the study between poetry written by humans and poetry written through artificial intelligence, in terms of originality, suspense, creativity, and the possibility of recommending it or preferring one over the other. The results showed that poetry written by humans received positive comments, while poetry generated by machines received negative comments.

It should be noted that all the previous studies whose results were discussed and compared with the results of this study are studies that were applied to creative writing through artificial intelligence and not ChatGPT4. Besides, those studies have been applied to creative writing in languages other than Arabic. Therefore, the current study is not preceded by any study measuring the effectiveness of using ChatGPT4 in creative writing service in the Arabic language.

8 Conclusion

The results showed the vast difference between human writing in Arabic and writing using artificial intelligence programs, especially ChatGPT4, as it is the most advanced version of artificial intelligence applications and programs. It may be different for English and other languages. As for the Arabic language, the results of this research indicate that artificial intelligence programs, even in its most advanced version, ChatGPT4, are lagging behind in keeping up with the Arabic language and being a substitute for human creative writing, especially in the fields of poetry and short stories. Its use as a medium for creative writing in Arabic, or even as an aid to human writing, still faces great challenges.

9 Recommendations

The research recommends the necessity of cooperation between institutions that develop artificial intelligence programs and experts in the Arabic language, who are native speakers of Arabic, to reduce the gap between the Arabic language and artificial intelligence software, and benefit from it in the service of the Arabic language.

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and has been referenced appropriately.

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