

# ***ChatGPT Makes a Difference in Daily Life: As a Life Guidance***

**Hanting Lou<sup>1,a,\*</sup>**

<sup>1</sup>*Computer Science, Broward College, Fort Lauderdale, United States*

*a. louh@mail.broward.edu*

*\*corresponding author*

**Abstract:** Although Chat Generative Pre-trained Transformer (ChatGPT) has made significant strides in various domains such as education, healthcare, and music, the current situation highlights a lack of comprehensive research and analysis regarding its influence on these vital aspects of life. This research commences by outlining ChatGPT's training capabilities and its developmental journey. Subsequently, this review delve into its practical application in real-world scenarios, where ChatGPT is assigned the task of generating a 90-second background score while adhering to specific constraints. A notable assessment by Marco Cascella and colleagues is then presented, where ChatGPT was engaged to generate a medical report for ICU patients, using a set of non-sequentially provided medical parameters such as treatments, laboratory results, and respiratory metrics. This section also critically examines the limitations of ChatGPT in handling medical queries. Further, this review discussed the generative AI architecture of Baidu Anu, D, highlighting its remarkable efficacy, using ChatGPT as an illustrative example, particularly in pedagogical settings. The paper concludes by acknowledging the substantial contributions of ChatGPT in various arenas, while also addressing its inherent limitations. The study findings suggest that ChatGPT can notably benefit areas such as education, healthcare, or music, thanks to the robust language AI model created by OpenAI.

**Keywords:** ChatGPT, Deep Learning, Life Guidance

## **1. Introduction**

The wave of deep learning has generated numerous related research and applications [1-3]. OpenAI, a preeminent artificial intelligence research institution based in the U.S., introduced ChatGPT, an advanced natural language processing tool, in November 2022. Demonstrating unparalleled prowess in linguistic comprehension and text synthesis, it secured a user constituency surpassing 100 million by the close of 2023. The implications of ChatGPT's deployment are profound, with marked contributions observed in domains such as education, health, and musical studies.

Whereas, considering the prevailing situation where the utilization of ChatGPT has significantly outstripped the research in its associated domains. ChatGPT plays a pivotal role in enhancing the daily lives of individuals by serving as a multifaceted utility. It exhibits a broad spectrum of utility, encompassing the provision of information, adept handling of inquiries spanning a wide array of subjects, facilitation of linguistic translation, proffering invaluable guidance for writing and editorial tasks, offering discerning recommendations within the realm of entertainment, and even extending

its utility to the domain of emotional support through profound and meaningful discourse. Consequently, ChatGPT emerges as an indispensable tool, poised to expedite and augment the facets of everyday existence. This paper will systematically investigate the significant contributions of ChatGPT to various facets of human life, with an emphasis on its applications in education, health care, and music.

In 2019, research led by Kim demonstrated that ChatGPT, a generative model [4], when trained on essays evaluated by humans, exhibited a notable correlation (0.86) with human scorers. This model's proficiency in discerning crucial elements of exemplary essays and furnishing feedback comparable to human annotators was evident in the findings. An increasing number of people use ChatGPT to Diagnose if they are sick and inquire about relevant medical knowledge; however, despite ChatGPT's positive impact in healthcare, David A. Asch, MD, remains cautious about its widespread adoption in the field [5]. In 2022, David questioned the suitability of AI chatbots like ChatGPT for roles in clinical healthcare. His reservations were mainly due to an 85% accuracy rate, which he considered insufficient for high-stakes medical situations. It's noteworthy that ChatGPT has demonstrated unexpected capabilities in musical creation. In April 2023, Robert W. McGee employed ChatGPT to craft a 90-second musical score for a taekwondo tournament [6]. The Artificial Intelligence (AI) incorporated songs like "If" and "Eye of the Tiger," producing a detailed narrative of how the routine could unfold. Although McGee had hoped for a more comprehensive, turnkey solution, he was generally pleased with the results.

Despite the prevalence of the topic in daily life, spanning areas such as music, healthcare, and more, few have offered a comprehensive review of this domain. This paper aims to concurrently explore the influence of ChatGPT across three sectors: education, healthcare, and music. This not only facilitates a deeper understanding and utilization of this intelligent language model but also may pinpoint the shortcomings of ChatGPT, affording OpenAI opportunities for enhancement.

## **2. Method**

### **2.1. The Introduction of GPT**

The Generative Pre-Trained Transformer 3 (GPT-3) represents the third iteration of an autoregressive language model, meticulously developed by OpenAI. This model demonstrates adeptness in generating text that emulates human-like constructs and facilitates interactions with users in a natural and intuitive manner. OpenAI researchers, in developing GPT-3, submerged it in a comprehensive corpus of human-composed text, enabling the model to anticipate succeeding words contingent upon preceding context, a process optimized utilizing backpropagation—methodologically adjusting model parameters to attenuate discrepancies between anticipated and actual outputs.

Renowned [7] for its aptitude to formulate coherent text that adheres to the format and stylistic norms of scientific manuscripts, ChatGPT has undergone meticulous training across voluminous datasets, employing 175 billion parameters on Microsoft's Azure AI supercomputer. It has mastered the generation of text paralleling human-created scientific prose in grammar, stylistic attributes, and content. Consequently, ChatGPT emerges as an invaluable instrument for researchers, facilitating the production of extensive scientific texts, which may include descriptive portrayals of experimental methodologies and outcomes, encapsulations of research discoveries, or evaluative review articles.

### **2.2. Developing Background Music Based on ChatGPT**

Current research utilizes AI technology to develop background music for the opening ceremony of college football games. "Create a 90-second musical piece suitable for the kickoff of college football games." Subsequently, the researchers issued this instruction to ChatGPT.

ChatGPT's Respond:

Title: "College Gridiron Glory"

Duration: 90 seconds

Instrumentation:

Brass Section (Trumpets, Trombones, Tubas)

Percussion Section (Snare Drums, Bass Drums, Cymbals)

Strings (Optional: Violins & Cellos for underlying harmonies)

Electric Guitar (For a modern edge)

Optional: Crowd chant or a group of vocalists

Structure:

0:00 - 0:10

Intro - Soft drumroll leading to a grand brass fanfare, hinting at the main theme.

0:10 - 0:30

Main Theme - Powerful and triumphant brass section delivers the central melody, with snare drums providing a marching rhythm. Electric guitar subtly supports the melody.

0:30 - 0:45

Bridge - A more subdued moment. Strings take over with a supportive and uplifting harmony. Percussion maintains energy with a softer rhythm.

0:45 - 1:00

Climax - Return of the main theme but grander. The entire ensemble comes together. The electric guitar could have a short, energetic solo here.

1:00 - 1:15

Crowd Chant/Vocals - Chanting of something universally recognizable like, "Let's Go!" or "Fight On!" adds to the collegiate atmosphere.

1:15 - 1:30

Outro - A recapitulation of the main theme, fading out with the echoing chants, leaving the crowd energized and ready for the game.

The exact instrumentation and dynamics can be adjusted based on the preference of the college or ensemble playing the piece. The aim is to invoke pride, energy, and anticipation for the game ahead.

Comments: The research team was happy with the findings. Even though they hoped for a more in-depth response that wouldn't require much from me, they probably had too high expectations.

### 2.3. Drafting a Medical Report Based on ChatGPT

In an evaluation, Marco Cascella [8] and his group tasked ChatGPT with drafting a medical report for an ICU patient, providing assorted parameters such as treatments, laboratory samples, and respiratory metrics in a non-sequential fashion. Impressively, ChatGPT accurately categorized most parameters, even when presented as abbreviations. It demonstrated self-correction when queried about parameter placements. A limitation was discerning causal relationships between conditions like ARDS and septic shock. The data sources might not be sufficiently comprehensive, and ChatGPT isn't primarily designed for medical inquiries, lacking nuanced expertise. Still, it provided relevant therapeutic suggestions and excelled in distilling information for both clinical and layman communications.

Baidoo-Anu, D. [9] found that generative AI constructs, exemplified by ChatGPT, demonstrate prodigious aptitude in pedagogical milieus:

Pedagogic Augmentation: ChatGPT proffers bespoke scholastic assistance. For illustration, scholars confronting advanced calculus conundrums may solicit granular elucidation, tailored to distinct cognitive trajectories.

**Linguistic Acumen Enhancement:** ChatGPT serves as a conduit for linguistic mastery. An aspirant, endeavoring to cultivate proficiency in French, can engage in intricate dialogues, fortifying phonetic accuracy and fluency.

**Scholarly Inquiry Facilitation:** ChatGPT furnishes comprehensive treatises on multifarious topics. Academicians delving into sustainable energy paradigms can derive intricate insights, ameliorating potential epistemological voids.

**Digital Pedagogic Enhancement:** ChatGPT amplifies e-learning curricula. Within a digitalized astronomy module, learners might undertake a meticulous dissection of astral phenomena, engendering profound comprehension.

**Preliminary Analytical Appraisal:** ChatGPT conducts scrupulous textual evaluations, identifying potential areas for amplification. Upon crafting a discursive essay on geopolitical intricacies, an academician might procure critiques on argumentative cogency.

**Situational Interactions:** ChatGPT stands as a linchpin for experiential simulations. Within commercial pedagogy, for instance, scholars can orchestrate negotiation simulations, accruing instantaneous feedback on strategic acumen and comportment.

**Pedagogic Inclusivity Enhancement:** ChatGPT caters to scholars necessitating adaptive methodologies. Individuals with visual impairments, for instance, might capitalize on its functionalities for auditory epistemic articulations.

### 3. Application and Discussion

It is commonly acknowledged in academic circles that ChatGPT has played a pivotal role in enhancing domains such as education, healthcare, and music, particularly in the realms of original music composition and foundational medical consultations.

It still exhibits many limitations and challenges when used in daily life, including data reliance in model efficacy, constraints in knowledge representation, and transitory memory phenomena.

The efficacy of ChatGPT is intricately tethered to the caliber and volume of the training data. A paucity of, or non-representative data can potentially attenuate the model's performance.

Given the unsupervised learning paradigm employed in ChatGPT's training process, its capacity for knowledge representation is not without limitations. Specifically, it might struggle with intricate reasoning challenges or specialized domain tasks.

Owing to the foundational reliance on the Transformer architecture, inclusive of a self-attention mechanism, ChatGPT may grapple with issues of ephemeral memory when processing extended sequences. This can precipitate lapses in content recall, potentially undermining conversational quality.

Nevertheless, being the world's most renowned language-based artificial intelligence model, ChatGPT has significant room for growth. One of ChatGPT's most compelling capabilities is its capacity to tailor its responses based on the user's linguistic tendencies and preferences. Through sustained engagement, it learns the user's linguistic nuances, tone, and style, allowing for progressively refined and pertinent replies. ChatGPT can be calibrated to cater to the distinct demands and inclinations of each user, potentially elevating customer service and educational experiences. Moreover, given the extensive data generated by ChatGPT's engagements, developers can craft models that resonate closely with individual user preferences, fostering a more tailored and immersive experience [10]. Article anticipates that in the imminent future, ChatGPT will be adept at swiftly delivering responses tailored to the unique habits and preferences of individual users.

## 4. Conclusion

In the scholarly endeavor delineated herein, the article proactively engages in a meticulous investigation and analytical discourse pertaining to ChatGPT's role and contributive impact across three pivotal sectors: education, healthcare, and music. The investigative framework operationalizes ChatGPT within real-world contexts, rigorously evaluating its competence in diverse tasks such as improvising a 90-second musical composition under delineated constraints; systematically organizing and analyzing a spectrum of unstructured medical parameters—encompassing treatment strategies, experimental findings, and respiratory markers—to construct a comprehensive medical report for ICU patients; and identifying and succinctly summarizing its exhibited proficiencies in educational milieus. After subjecting ChatGPT to a wide range of evaluation methods and practical use cases, the results confirm that ChatGPT not only exhibits impressive effectiveness in various domains but also reveals significant untapped potential. Looking ahead, the aim is to reduce ChatGPT's reliance on specific models, mitigate short-term memory limitations, and increase the volume of data samples, ultimately enhancing its interactive capabilities with users in future iterations.

## References

- [1] Chan, H. P., Samala, R. K., Hadjiiski, L. M., & Zhou, C. (2020). *Deep learning in medical image analysis. Deep Learning in Medical Image Analysis: Challenges and Applications*, 3-21.
- [2] Qiu, Y., Wang, J., Jin, Z., Chen, H., Zhang, M., & Guo, L. (2022). *Pose-guided matching based on deep learning for assessing quality of action on rehabilitation training. Biomedical Signal Processing and Control*, 72, 103323.
- [3] Chen, H., Chen, P., Qiu, Y., & Ling, N. (2023). *FARNet: Fragmented affinity reasoning network of text instances for arbitrary shape text detection. IET Image Processing*.
- [4] Kim, S., Park, J., & Lee, H. (2019). *Automated essay scoring using a deep learning model. Journal of Educational Technology Development and Exchange*, 2(1), 1-17.
- [5] Asch, D. A., MD. (2023). *An Interview with ChatGPT About Health Care. NEJM Catalyst*, (7), DOI: 10.1056/CAT.23.0043.
- [6] McGee, R. W. (2023). *Using Artificial Intelligence (AI) to Compose a Musical Score for a Taekwondo Tournament Routine: A ChatGPT Experiment (Working Paper). Fayetteville State University*.
- [7] Radford, A., Wu, J., Child, R., Luan, D., Amodei, D., Sutskever, I. (2019) *Language Models are Unsupervised Multitask Learners*.
- [8] Cascella, M., Montomoli, J., Bellini, V., & Bignami, E. (2023). *Evaluating the Feasibility of ChatGPT in Healthcare: An Analysis of Multiple Clinical and Research Scenarios. Journal of Medical Systems*, 47(33). Published 04 March 2023.
- [9] Baidoo-Anu, D., & Owusu Ansah, L. (2023). *Education in the Era of Generative Artificial Intelligence (AI): Understanding the Potential Benefits of ChatGPT in Promoting Teaching and Learning. Journal of AI*, 7(1), 52-62.
- [10] Mijwil, M., et al. (2023) *The Purpose of Cybersecurity Governance in the Digital Transformation of Public Services and Protecting the Digital Environment, Mesopotamian Journal of Cybersecurity*, vol. 2023, pp. 1–6.