FLUENT YET UNCOMPREHENDING: ARTIFICIAL INTELLIGENCE, A 'STOCHASTIC PARROT'

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Abstract

This study investigates the intrinsic limitations of Artificial Intelligence through a humanities lens, emphasizing its inherently stochastic characteristics and the resulting incapacity to produce meaning without prior linguistic context. To analyze the same a Sanskrit word is asked for meaning in chatbot. The results are published with possible suggestion for rectification. Although modern AI systems, especially large language models, can replicate the structure and flow of human communication, their outputs lack genuine interpretive richness. Within the humanities, meaning is not simply a result of syntactic organization; it emerges from situated language, cultural context, and human intentionality - elements that are beyond the reach of probabilistic algorithms. This paper argues that the semblance of meaning in AI-generated language is maintained solely through the imposition of human interpretation, and that authentic engagement with meaning necessitates a return to primary texts: the original sources of thought, expression, and cultural memory. By re-focusing on these texts, the research advocates for a revitalized critical engagement that resists delegating interpretation to machines, thereby reaffirming the indispensable role of the human reader in the construction of meaning.

Keywords: AI, LLM, Prompts, Stochastics.

Abbreviation:

1. AI: Artificial Intelligence
2. LLM: Large Language Models

Artificial Intelligence (AI) refers to the creation of computer systems that can execute tasks usually necessitating human intelligence, such as learning, reasoning, and problem-solving. AI technologies, which encompass machine learning and natural language processing, evaluate extensive datasets to facilitate informed decision-making and automate various processes. In the realm of education, AI improves personalized learning by adjusting to the specific needs of individual students and offers tools such as chatbots for immediate assistance. Although AI provides increased efficiency and accessibility, it simultaneously raises issues regarding data privacy, ethical considerations, and the critical need for human oversight in decision-making processes.

Stochastic parrot is a metaphor coined by Emily M Bender that rightly argues and states that LLMs are purely driven by probability and the lack of understanding is evident at language level, with the context being a compulsory attribute to get right meaning. This paper is used to explain the idea of 'stochastic parrot' with an example word from Sanskrit. AI is progressively reshaping education by facilitating smarter, more personalized, and accessible learning experiences.AI systems possess the capability to analyze student data, adjust to individual learning requirements, and automate tasks such as grading and performance tracking, thereby enhancing the efficiency of teaching and learning. One of the most prevalent AI tools utilized in education is the chatbot, an AI-driven assistant that can engage with students in real time.

Chatbots though not tailored specifically for academics, offer both academic and administrative assistance, responding to inquiries regarding coursework, schedules, and assignments. Functioning as virtual tutors, they can assist students in navigating complex subjects, provide immediate feedback, and boost engagement, particularly in large or online learning settings. Their round-the-clock availability guarantees ongoing support beyond the classroom, alleviating pressure on educators and support personnel. In addition to chatbots, AI fosters personalized learning by suggesting customized content based on individual performance. The prompts are validated by recent publications of lot of self-help books to make the search much more precise and spot on. Its massive in online ecommerce websites, where it has occupied the status in par with fictional books.

AI also improves accessibility for a diverse range of learners through features such as real-time translation, speech-to-text, and adaptive interfaces. This contributes to closing learning gaps and promotes inclusion for students with disabilities or language challenges. Nevertheless, challenges persist.AI systems depend on sensitive student data, which raises concerns regarding privacy and security. There is also the potential for bias in algorithms and a decrease in

meaningful human interaction within the learning process. Moreover, many educators lack the necessary training to effectively incorporate AI tools into their teaching practices.

The Inability of Chatbots is to generate meaning without specifying language. Chatbots have become vital instruments in digital communication, offering support across various sectors, including customer service and education. However, despite their sophisticated features, chatbots encounter a major drawback: they cannot produce meaningful responses without a clearly defined language. Specifying a language is essential as it establishes the structural and semantic framework necessary for chatbots to interpret inputs and generate coherent outputs.

Language serves as the primary medium through which chatbots analyze user inquiries and formulate responses. When a language is specified - be it English, Spanish, or Mandarin - chatbots utilize language-specific models and databases to examine the syntax and semantics of the input. In the absence of a defined language, ambiguity can occur. Many languages share similar characters, phonetics, or even loanwords, and without the linguistic context, chatbots struggle to accurately ascertain the intended meaning. Consequently, they often misunderstand user input, leading to irrelevant or nonsensical replies.

Moreover, natural language processing is heavily reliant on grammar and syntax rules that differ across languages. Without access to these rules, chatbots are unable to construct grammatically correct or contextually suitable sentences. Furthermore, semantic comprehension is based on cultural and linguistic conventions. Without a specified language, chatbots lose these semantic anchors, making it impossible for them to facilitate meaningful communication.

Fundamental Flaw of Chatbots: Inconsistent Interpretation from Direct Prompts. One of the most significant shortcomings of current chatbots is their failure to consistently grasp meaning when presented with brief, direct prompts - Chatbots function based on stochastic behavior - a probability - driven system. This indicates that they do not genuinely comprehend the word; instead, they infer its meaning based on its frequency of use across various contexts in their training data. Consequently, identical inputs can yield entirely different outputs, even within the same interaction. This lack of consistency leads to confusion and unreliability, particularly in scenarios where accuracy is crucial. It highlights a basic flaw in the way chatbots interpret meaning: they do not genuinely understand; they merely choose from established patterns. Regardless of how sophisticated the model may be, this problem persists. If a chatbot cannot reliably interpret a single word, its dependability in handling more intricate tasks is also in doubt. This is not merely a

trivial issue. It represents a fundamental limitation—and one that has a direct impact on trust, usability, and practical performance.

The Word and its Meaning: ***Fig 1****: The search of meaning of the word 'gomrga' in a chatbot,where the meaning is not provided.*

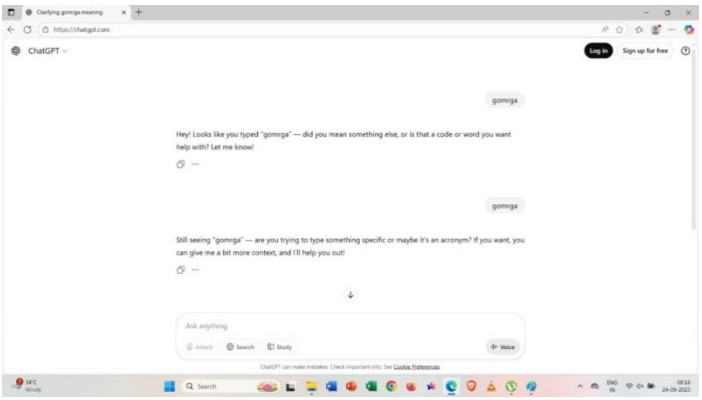
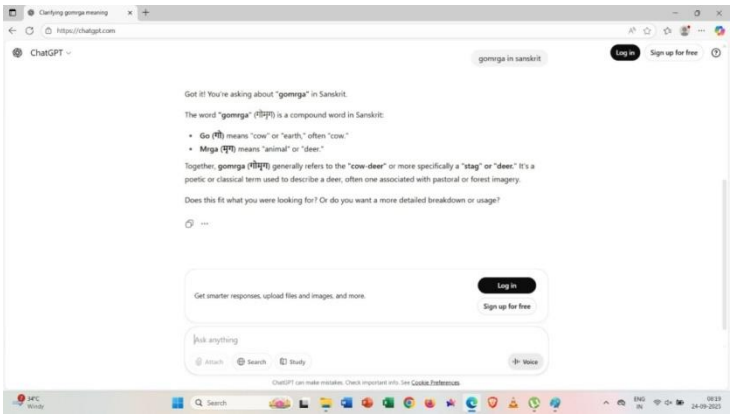


Fig 2: The search of meaning of the word 'gomrga' in a chatbot where the meaning is given after providing the suitable prompt, in this case the language of origin of 'gomrga'



Significant progress has been made in natural language understanding and generation by large language models (LLMs). Nonetheless, a notable limitation arises when these models encounter words that are either non-English or infrequently used, such as 'gomrga', without any contextual language information. When asked for the meaning for the first time, the AI couldn't identify the word and it asked the researcher to check for the spelling which is very much absurd having in consideration the scholarliness of the researcher. When the word is specified with

the language of its origin, the chatbot gave the correct meaning. This is somewhat embarrassing as the language of origin is a mandatory prompt in certain situations.

AI language models and chatbots are engineered to manage a diverse array of human inputs. However, when confronted with a term like “gomrga” - which possesses significance in a specific language but is not recognized by default - the system is unable to generate any pertinent interpretation. This shortcoming is not solely due to infrequent usage, but rather stems from the model's reliance on English-centric or high-resource language frameworks.

Conclusion:

This research has advocated for a human-centered, text-oriented methodology as a vital alternative to the increasing dependence on chatbot-based or computational systems for linguistic interpretation. Although large language models and AI-driven chatbots provide swift processing and superficial translation, they are inherently constrained when faced with unrecognized or culturally specific terms, especially those emerging from less-documented languages or dialects. Such systems are frequently trained on incomplete, biased, or narrowly standardized corpora, making them ill-prepared to engage with terms that lie outside of dominant linguistic frameworks.

In contrast, the methodology proposed in this paper is rooted in the meticulous reading of primary texts, contextual analysis, and philological inference that facilitates a more precise and culturally contextualized understanding of obscure lexical items. The case study of the term “gomrga” illustrates that meaning can be effectively retrieved through thorough examination of oral narratives, folk literature, and historical documents, without reliance on computational tools. This approach not only fills the interpretive voids left by AI systems but also reaffirms the lasting significance of human scholarship in language documentation, cultural preservation, and the ethical management of linguistic diversity.

Work Cited

Birchall, Jon. “*ChatGPT 1000+* Prompts,” We are Books, 2025

“Gomrga.” *Wikipedia*, Wikimedia Foundation, Ashvamedha - Wikipedia.