PRELIMINARY DRAFTS

Influence of Chat GPT in Academia

An analysis of its impact on learning, teaching and evaluation modality in academic institutions

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ABSTRACT

CCS CONCEPTS

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**KEYWORDS**

Artificial Intelligence, Chatbot, Chat GPT

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1. Introduction

In Computer Science during recent years, Artificial Intelligence has been flourishing its performance rapidly in a wider range. The significant research and investment in AI have crafted the technology more applicable that are meant to solve the realistic problems. At present the most fascinating applications trending globally is text-based conversational AI model initially called Chatbot. A Chatbot is a Human Computer Interaction (HCI) based conversational model designed and developed to interact (either voice or text) with humans and other models. [C] Alan Mathison Turing (an English Mathematician and Computer Scientist) proposed a paper called “Turing Test” in 1950 which main concept was whether the machine can or cannot think like human? If the evaluator cannot distinguish the conversation between a computer or human then it passes the “Turing Test”. It was an innovative idea of Chatbot. [C] The first Chatbot was called “ELIZA” designed to simulates the conversation that intended to be a psychotherapist developed in 1966. It operates using pattern matching and response selection scheme based on canned phrases but cannot learn, does not have capability to interpret the user’s input in a thoughtful way. “PARRY” in 1972, Chatterbot in 1991 and following “ALICE” in 1995, Smarter Child in 2001 were the prominent name in the history of Chatbot. [C] Later, the era of virtual personal assistants begun with Amazon’s Alexa, Apple’s Siri, Microsoft’s Cortana and IBM’s Watson. [C] Multiple industrial sectors have associated with this technology to enhance their performance. Due to its broader abilities and productivity, Business companies integrates it on the service of virtual customer assistant. Generally, Chatbot can be categorized into two types: AI based and Rule Based. AI based are intelligent bots that uses machine learning algorithms that understand and learns from the experiences whereas Rule-based bots operates from the pre-defined rules and does not learn from experiences. Based on knowledge domain Rule-based bots includes FAQ (Frequently Asked Questions), Single-turn and Retrieval-based chatbots. AI based bots includes Open domain, conversational, task-based, personal assistant and social chatbots.

**1.1 Background**

The birth of Large Language Models (LLM) like: Open AI’s CHATGPT (Generative Pre-trained Transformer) and Google’s BERT (Bidirectional Encoder Representations from Transformers) has marked the stepping stones in the advancement and the progress of Deep Learning and Natural Language Techniques. However, there are lot of AI based text generator model developed before but due to its dynamic solving skills it has got the limelight in the computing market. Chat GPT (Generative Pre-trained Transformer) is an

Despite the unique properties Chat GPT acquire there are lot of serious questions need to be clarified. As we know, Education is one of the main components of the society. So, the paper is focusing on the field of educational domain relating with Chat GPT. Some of the important questions regarding these models that need to be research are:

* What can be the long-term impact concerning its accountability, trustworthiness and ethical implications using Chat GPT in the field of academic sector?
* What is the potential impact on society if the learning system means to use Chat GPT? Are they qualified to contribute the society?
* Do the academic institutions have to take it as a tool or a threat or how can they upgrade their teaching modality and evaluation different than Chat GPT?
* Does it really kill the creativity skills of the students? What should be the limitations on learning methods for student’s edition or how can it be manageable for different audiences in different sector?
* Do the data or information provide by Chat GPT models are accurate? What are the consequences if the response data are not up to date in the field of Academic libraries?
* Using Chat GPT, user means learning, acquiring knowledge or is it cheating towards the academia? Is it Good or Bad means of Technology?
* What makes the Chat GPT unique than others AI based tools that influences rapidly like a viral disease?

**1.5 Research Objectives**

To dive inside the working mechanism, evolution of Chat GPT and analyzing its accountability, trustworthiness, ethical and moral values as well as impact on society.

To analyze the challenges and opportunity on academic sectors from the Large Language Model (LLM) based Chat GPT.