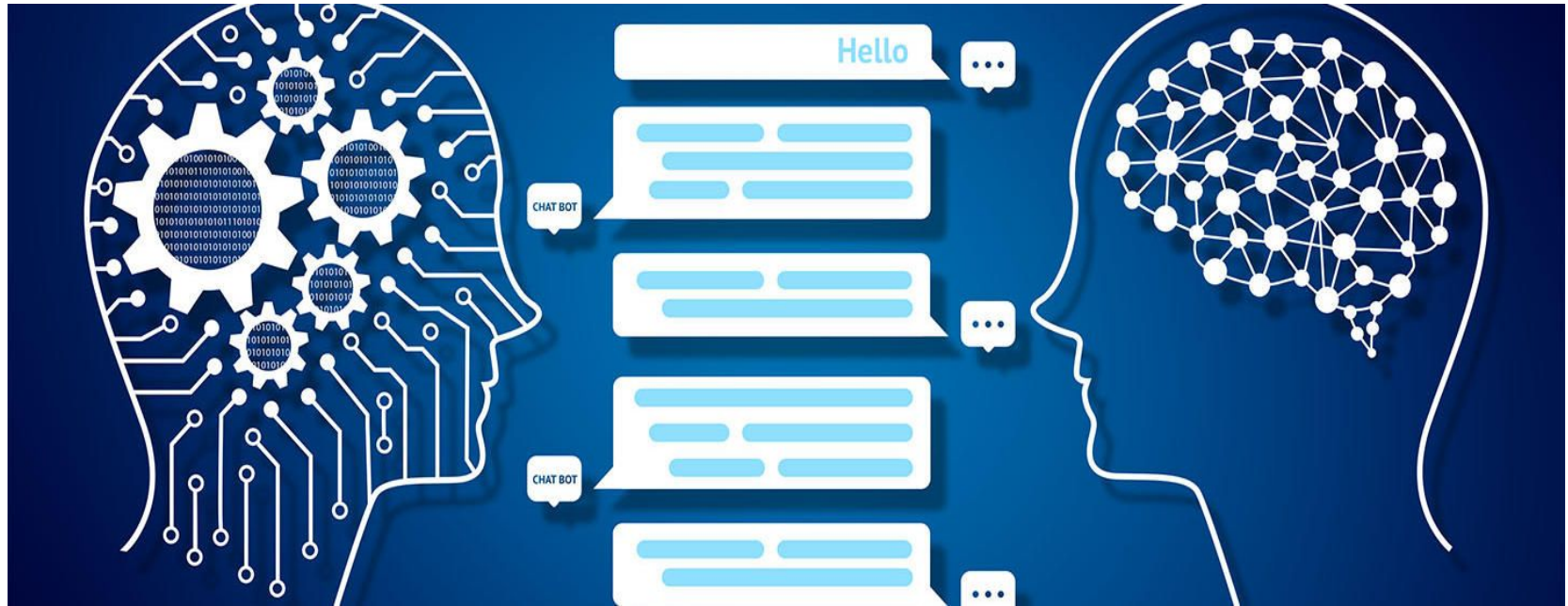


# *ChatGPT-4: Shaping the Future of Intelligent Conversational Agents*

Dr.Laith R. Flaih

Computer Science Department



# Intoduction

- When ChatGPT was first introduced in November, 2022, there were mixed feelings about the technology. Few marveled at it, few argued about its efficacy while others feared it, given its abilities to replace humans. However everyone agreed that ChatGPT was the next technological revolution in the making. Afterall OpenAI, the company behind ChatGPT, has successfully trained a chatbot to converse in the way humans
- OpenAI has once again managed to turn heads by introducing the latest version of ChatGPT, ie. GPT4. Officially launched on March 13,2023, GPT 4 has taken AI integration a step further. GPT- 4 promises added functionalities, safety and responsiveness than its predecessor GPT 3.5. Let us have a look at ChatGPT 4 and its features.

# What Is Chat GPT 4?

- Just like Chat GPT3 and ChatGPT 3.5, GPT-4 or Generative Pre-trained Transformer 4 is also a product that implements OpenAI's large language models (LLM).
- A large language model is a neural network built by deep learning. Like ChatGPT, Large Language Models are general purpose models that are capable of handling a variety of tasks.
- launched to a limited audience, GPT 4 is the new improved version of ChatGPT that has a better responding interface and a better ability to take care of, "more nuanced instructions", according to OpenAI.

# Features of ChatGPT4

- ChatGPT 4 is more humane in its conversational styles. It uses simple language and words and has less technical jargon.
- Users worldwide believe that ChatGPT 4 is more intuitive, reliable compared to earlier models of ChatGPT. It is also more equipped to handle sophisticated problems and errors.
- Another added benefit of ChatGPT 4 is that just like Google Lens, GPT 4 can process picture inputs and provide textual outputs of the same. This feature is yet to be launched but is expected to reach users soon.

# Features of ChatGPT4

- GPT 4 is also more proficient with foreign languages compared to Chat GPT earlier versions. This can be a major advantage for the global community of multilingual users who are more comfortable in their native languages. Companies have already started using this feature of GPT 4 to their benefit and one such company is Koo. Koo, an Indian counterpart of twitter, has already made use of the GPT4 language toolset to connect its Indian users to the global world.
- GPT-4 is more creative and inventive than the previous Large Language Models. ChatGPT 4 is imaginative in the way that it can work with users while working with users on creative thinking activities such as songwriting, screenwriting, and more.

# Features of ChatGPT4

- GPT 4 is immensely useful in virtual assistance and can help sift through calendars ,emails and can even help build schedules.
- ChatGPT 4 safety feature has also improved compared to other versions. The chatbot now responds more compassionately to negative input of human behavior and is more humanlike in addressing human emotions.
- GPT-4 has increased its token limit of the previous ChatGPT version, which was 4000 tokens to 32,000 (equivalent to 25,000 words). This means that the chatbot will be able to take greater input from users and process it.

# Limitations of GPT-4

- Despite the innovations and improvements to the smart chatbot, ChatGPT still has a long way to go. There are few avenues that GPT-4 can be seen underperforming. Here are a few of them:-
- ChatGPT 4, like its predecessors, is unable to update its knowledge in real time. This was also the reason that ChatGPT was unable to crack the tough UPSC exam of India due to its inability to update its knowledge and current affairs.
- Users are also concerned about arithmetic errors that the bot is generating in its answers. People are preferring to use the conventional calculator instead of the ChatBot.

# Limitations of GPT-4

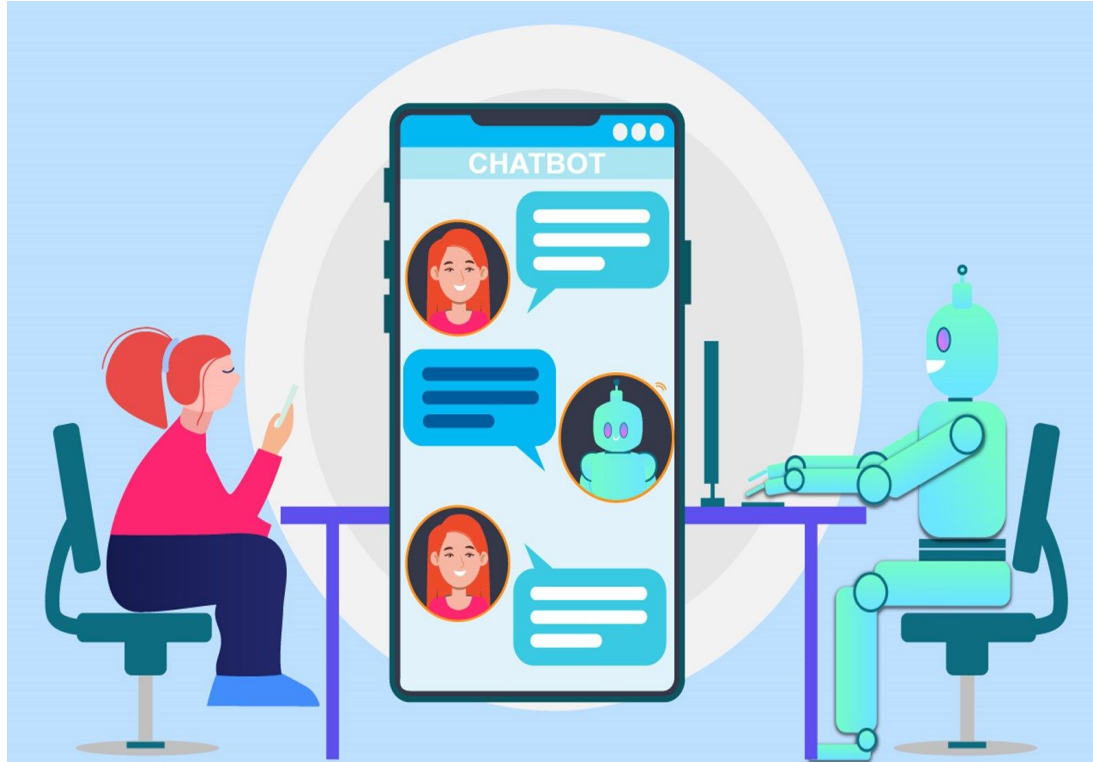
- ChatGPT is the largest AI model ever released with almost 100 trillion + parameters. Training such a model requires a massive amount of computing and infrastructure to maintain. Which is why, for businesses, incorporation of ChatGPT in their management systems can be an expensive affair.
- Finally, GPT-4 is a constantly evolving chatbot. The users can get overwhelmed given the changing nature of outputs.



# Who Has Access to GPT-4

- ChatGPT 4 allows users to experience only its text based features, and access to GPT 4's latest features are restricted for non-members. To be a member of ChatGPT plus, one needs to pay a fee of 20\$ each month as a subscription fee.

# ChatBot



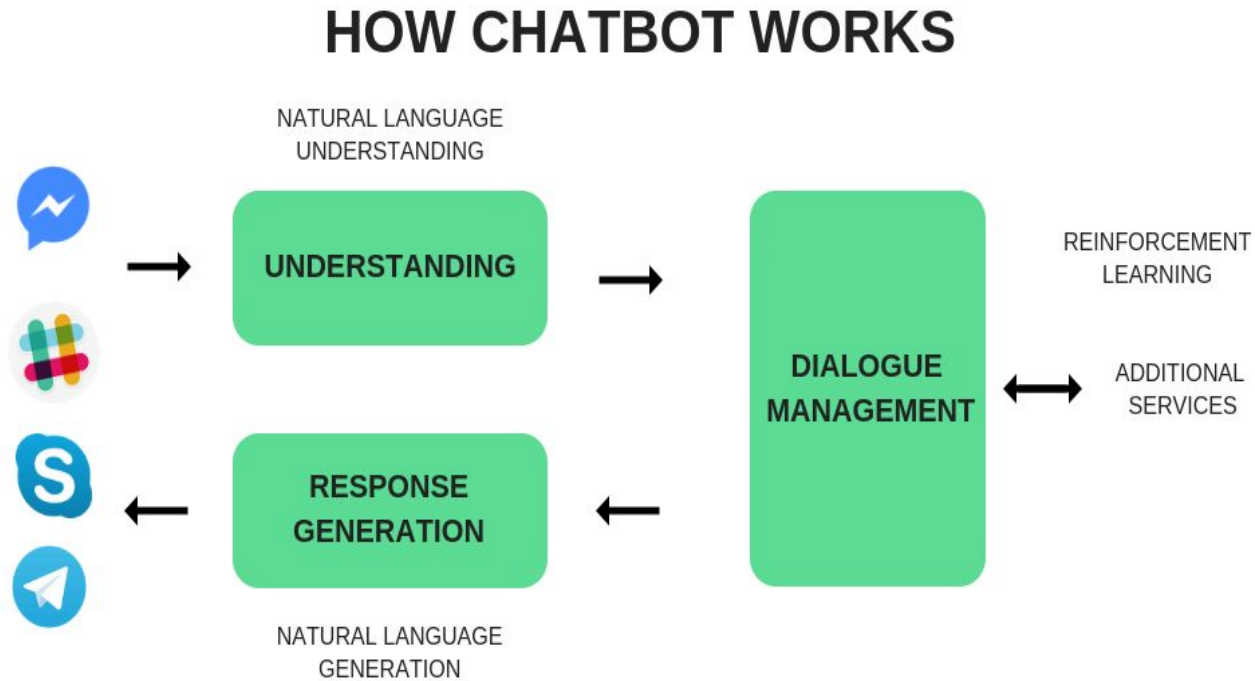
# ChatBot

- A Chatbot, short for "chat robot," is a computer program designed to simulate conversation with human users, especially over the Internet. These artificial intelligence (AI) systems are programmed to understand and respond to natural language inputs, allowing users to interact with them in a conversational manner.
- Chatbots can be implemented through various platforms, such as messaging applications, websites, or mobile apps, and they serve a wide range of purposes.

# ChatBot

- Some chatbots are designed for customer support, providing information or assisting users in solving problems, while others may be created for entertainment, virtual companionship, or to automate specific tasks.
- The functionality of a chatbot depends on its programming and the underlying artificial intelligence or machine learning algorithms that enable it to interpret user queries and generate appropriate responses.

# How Chatbot Work



# The features of a Chatbot

The features of a Chatbot can vary depending on its design, purpose, and the technology used to develop it. However, common features of Chatbots include:-

- **Natural Language Processing (NLP):** Chatbots utilize NLP to understand and interpret user inputs in natural language. This allows them to comprehend and respond to a wide range of queries.
- **Intent Recognition:** Chatbots identify the intent behind user messages to determine the appropriate response. This involves understanding the user's request or question and taking relevant actions.
- **Context Awareness:** Advanced Chatbots maintain context throughout a conversation, allowing them to understand references and provide more coherent and relevant responses over the course of an interaction.

# The features of a Chatbot

- **Multi-turn Conversations:** Chatbots can engage in multi-turn conversations, remembering past interactions and building upon them to create a more fluid and meaningful dialogue with users.
- **Personalization:** Some Chatbots can personalize interactions based on user preferences, historical data, or user profiles. This enhances the user experience by providing tailored responses and recommendations.
- **Integration with Other Systems:** Chatbots often integrate with other systems, databases, or APIs to fetch and provide information. This allows them to perform tasks such as retrieving real-time data, making reservations, or accessing external services.

# The features of a Chatbot

- **Proactive Engagement:** Some Chatbots are designed to initiate conversations or provide information proactively, anticipating user needs. This feature is particularly useful for customer engagement and support.
- **Multi-Platform Support:** Chatbots can be deployed on various platforms, including websites, messaging apps, and social media platforms, allowing users to interact with them through their preferred channels.
- **Learning and Adaptation:** Many modern Chatbots incorporate machine learning algorithms, enabling them to learn from user interactions and improve over time. This adaptive learning process enhances the Chatbot's ability to understand and respond to user queries.



# The features of a Chatbot

- **Fallback Mechanism:** Chatbots may include a fallback mechanism to handle queries or user inputs that they cannot understand. This prevents the conversation from breaking down when faced with unfamiliar requests.
- **Security and Privacy:** Security features are crucial, especially when handling sensitive information. Chatbots may implement encryption and authentication protocols to ensure secure interactions and safeguard user privacy.
- **Analytics and Reporting:** Some Chatbots come with built-in analytics tools that allow developers or administrators to track usage patterns, identify common queries, and gain insights into user behavior.

# The features of a Chatbot

- Some chatbots are designed for customer support, providing information or assisting users in solving problems, while others may be created for entertainment, virtual companionship, or to automate specific tasks. The functionality of a chatbot depends on its programming and the underlying artificial intelligence or machine learning algorithms that enable it to interpret user queries and generate appropriate responses.