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COLLEGE OF COMPUTER SCIENCE AND INFORMATION TECHNOLOGY

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PROJECT PROPOSAL: BUSINESS CHATBOT

A Chat-bot is an intelligent system which can hold a conversation with a human using natural language in real time. Due to the rise of Internet usage, many businesses now use online platforms to handle customer inquiries, and many of them turn to chat-bots for improving their customer service or for streamlining operations and increasing their productivity. However, there is still a gap between existing chat-bots and the autonomous, conversational agents businesses hope to implement. As such, this paper will first provide an overview of chat-bots and then focus on research trends regarding the development of human-like chat-bots capable of closing this technological gap. We reviewed the literature published over the past decade, from 2005 to 2010, and presented an overview of chat-bots using a mind-map. The research findings suggest that chat-bots operate in three steps: **understanding the natural language input; generating an automatic, relevant response; and, constructing realistic and fluent natural language responses.** The current bottleneck in designing artificially intelligent chat-bots lies in the industry's lack of natural language processing capabilities. Without the ability to properly understand the content and context of a user's input, the chat-bot cannot generate a relevant response. Chat-bots must receive data inputs to provide relevant answers or response to the users (Users asking questions or making response to the customers' inquiries)

How do we apply deep learning in to business chatbots? By creating multiple layers of algorithms like artificial neutral networks, deep learning chatbots make intelligence decisions using structured data based on human-to-human dialogue such as a neural network called a transformer lies at the core of the ChatGPT algorithms. GPT is built on the GPT-3.5 architecture which utilizes a transformer –based deep learning algorithms, the algorithms leverages a larges pre-trained language model that learns from large amounts of text data to generate human-like response, our problem is to investigate how to address multiple customer questions simultaneously to increase productivity and efficiency of the business and it is interested because it easy for customers to interacts and get their inquires faster.