Chatbots: Changing User Needs and Motivations (Review)

This paper mainly focuses on the reasons why chatbots in current scenario often fail:

- Key success factor for chatbots and natural language user interfaces is how well they can support user needs in the conversational process seamlessly and efficiently.
- One of the main reason for chatbots to fail is the difficulty in designing chatbots for open ended conversations.
- Current chatbots designs lack in considering the way people use chatbot or for what purpose
- Chatbot initiatives too often aim for poor use cases ignoring user needs and user experiences.

Microsoft's Tay *"the ultimate chatbot fail."* :

Microsoft's Tay, deployed on Twitter in 2016 is considered as *the ultimate chatbot fail*. Tay was perceived as a cutting-edge AI-based chatbot, the goal being that she would learn and mimic the personality of a 19-year-old girl through interactions with Twitter users. **The problem** was that Tay not only learned from well-meaning Twitter users but also from Twitter trolls, giving Tay fluency in all sorts of hateful conversation.

- AI-powered chatbots, need substantial adaptation and maintenance to perform their task properly.
- To develop chatbots that adapt to the needs of specific users and conversational contexts, there is likely a need for improved user and context models.
- Chatbots and their interactions with humans must be analyzed and redesigned, not only with concern for specific interaction sequences, but also with the aim of improving generative responses to inputs from a range of users within a variety of conversational contexts.
- Users expect customer-service chatbots to be effective and efficient in conducting productivity tasks such as accessing specific content or helping with administrative chores.
- Successful chatbots seem to inform users about what to expect from the beginning. This means they are transparent about who the users are having a conversation with—that they are interacting with a chatbot, not a human.
- Chatbots are not a one-solution-fits-all technology. People have multiple motivations, and the purposes for using a chatbot can vary enormously. As such, there is a need for an appropriate range of use cases in the chatbot context