















## 7 CONCLUSIONS

Large effort has been invested in improving the ability of chatbots to interact in natural language with human users. As the popularity of chatbots increases, however, end-users will expect chatbot conversations that also use a register that is appropriate to the conversational context. To date, there has been research showing that register has impact on credibility, trust, and persuasiveness, but chatbot designers have had little or no concrete guidance on how to think rationally about the issue.

In this paper, we explored how register analysis, a concept from sociolinguistics, might be used to address this shortcoming, by providing a framework for characterizing linguistic register, as well as providing a basis for identifying its impact on user perceptions. The results show how the register analysis can characterize the patterns of language for particular contexts, and reveal distinct linguistic characteristics within conversations in the tourism domain. The analysis of these characteristics revealed not only variations and similarities between interlocutors, but also within conversations. We noted the importance of sub-registers as a mechanism used by humans to accomplish dynamic adaptation, and the inability of chatbots to follow suit. Clearly, the ability to track conversational purpose and adapt register is an important feature of natural human conversation, at least in the studied domain. Our future research will make use of our results to drive development of a practical framework to analyze and classify target situations, and then develop chatbot conversational engines both tailored to the target context and able to adapt register to the specific communicative purpose. Additionally, we plan on performing a side-by-side evaluation on the collected utterances when the tourist assistants answered the exact same question. In the meantime, we have provided a set of preliminary guidelines that designers might consider to improving the naturalness of language in the current chatbots.

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