Prof. Dr. Jan Krämer

**Lehrstuhl für Wirtschaftsinformatik
mit Schwerpunkt Internet- und
Telekommunikationswirtschaft**

UNIVERSITÄT
PASSAU

Wirtschaftswissenschaftliche Fakultät

Are you human? Interacting with Artificial Intelligence through Conversational Agents [Working Title]

Supervisor: Nikolai Sachs <nikolai.sachs@uni-passau.de>
Date: As of now
Type: Bachelor's Thesis, Master's Thesis
Language: German or English

Motivation:

Conversational agents, also called chatbots, are the most natural way for humans to interact with machines. They are commonly defined as "computer programs that simulate human conversations through voice commands or text chats and serve as virtual assistants to users" (Luo, Tong, Fang, & Qu, 2019, p. 937). They are being increasingly used in various economically relevant application areas such as customer support, sales or travel planning. In smart speakers, chatbots serve as entertainers and general-purpose assistants. While chatbots have been around for a long time, artificial intelligence has enabled chatbots to learn from past interactions, making them far more capable of answering user requests and allowing the design of chatbots that very closely mimic human behavior.

Consequently, humans increasingly interact with programs that act as if they were human. This new form of interaction raises the question of how humans behave when they interact with chatbots that are more or less human. Potential differences in behavior might have implications for when chatbots can replace humans and how chatbots should be optimally designed. Furthermore, when artificially intelligent chatbots are indistinguishable from humans, regulators might need to enact transparency obligations to protect users. Lastly, the increasing use of chatbots might have ethical ramifications.

Goal:

This thesis should summarize the scientific literature on how humans interact with artificially intelligent chatbots. The focus of the thesis should lie on chatbots that are used by firms to interact with their customers. It should answer the question of whether humans perceive and react differently to human-like chatbots compared to interactions with real humans or chatbots that are not perceived as being human. Implications should be derived for when chatbots can be used and how they should optimally be designed. Additionally, the potential need for regulation of artificially intelligent chatbots should be derived.

References and Related Literature:

Crolic, C., Thomaz, F., Hadi, R., & Stephen, A. T. (2021). Blame the Bot: Anthropomorphism and Anger in Customer–Chatbot Interactions. *Journal of Marketing*, *86*(1), 132-148.

Luo, X., Tong, S., Fang, Z., & Qu, Z. (2019). Frontiers: Machines vs. humans: The impact of artificial intelligence chatbot disclosure on customer purchases. *Marketing Science*, *38*(6), 937-947.