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Wonder document - first delivery

Keywords: Robot/AI personality, human-robot interaction, social presence, human behaviour

About us

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Area of interest

Our area of interest includes attitudes towards AI, if AI can help people who are lonely, AI personality, expectations for how AI should behave, why people choose to use AI and what can happen if AI becomes more human-like.

Our main focus for now is if chatbots and AIs in general can have a clear personality and how this could affect the interaction with users.

Questions

"What are the expectations of how an AI should behave?"

With a rapidly increasing amount of different AI's made for different purposes the expectation for what a given system is able to do, varies depending on the users earlier interactions with similar systems. We want to examine what the expectations of users are and how interacting with AI-systems behaving differently than what they expect affects them.

"Is it possible to make an AI more human in the way it acts?"

We are wondering if changes to how the AI interacts with users, can help humanize it and make it more approachable for new users. Things we could test could be if the language of the AI was more human-like, for examples using dialects and giving the AI more of a unique personality. Here we would also have to examine what makes an AI seem more human and what differentiates for example a conversation with a human and a conversation with a chatbot.

Methods

The questions we ask in this paper can be summarized into two main concerns: personality and human-robot interaction. We think a combination of literature review, interviews and

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user tests will be the best approach, considering the scope, theme and complexity of this study.

In robotics and AI, personality refers to a robot's ability to interact with users emotionally and logically (Rouse, 2017). They not only have to act logically, but do it with "style" whether through voice (Nass & Gong, 2000, p. 38), variations in emotion (Hu et al., 2013, p. 7), and a multitude of other channels for conveying personality. The literature review will serve to make us acquainted with past researchers' attempts at giving robots a personality, and people's reactions when interacting with this kind of robot. From this literature review, we may then identify and specify areas of interest.

Following this, we would be able to create meaningful and relevant interview questions. Interviews are an effective way of gathering rich information about users, which may include information about unexpected topics (Lazar et al., 2017, p. 188). This may be our main method of examining how humans react to the robot's personality.

We would like to conduct user tests as well, but there are hygienic restrictions which need to be considered due to COVID-19. Depending on the later circumstances, we will decide whether or not to conduct user testing. There are many possibilities here, but one example could be a Wizard of Oz approach (Feng & Sears, 2009, p. 156). This can be an easy way of feigning the robot's intelligence, yet simultaneously embody the intelligence in a robotic body.

Possible literature/resources

Amershi, S., Weld, D., Vorvoreanu, M., Fourney, A., Nushi, B., Collisson, P., ... & Teevan, J. (2019). Guidelines for human-AI interaction. Retrieved from https://www.microsoft.com/en-us/research/uploads/prod/2019/01/Guidelines-for-Human-AI-I nteraction-camera-ready.pdf

Følstad, A., & Bae Brandtzæg, P. (2017). Chatbots and the new world of HCI. Interaction ACM. 24(4), 38-42. DOI: <u>10.1145/3085558</u>

Lee, Kwan Min, Peng, Wei, Jin, Seung-A, & Yan, Chang. (2006). Can Robots Manifest Personality?: An Empirical Test of Personality Recognition, Social Responses, and Social Presence in Human–Robot Interaction. Journal of Communication, 56(4), 754-772.

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Zhou, M X., Mark, G., Li, J & Yang, H. (2009). Trusting Virtual Agents: The Effect of Personality. *ACM Trans. Interact. Intell. Syst.* 10, 2-3. DOI:https://doi.org/10.1145/3232077

<u>https://replika.ai</u> - Website where you can communicate with an AI, acting/disguising as a friend/talking companion.

References

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