Privacy concerns in the age of ubiquitous smart assistants in the home

Wonder Document
IN5620 Group 7

Description of the group

Kristian Arnesen Vik, kristavi@uio.no
Sigrid Hoddø Bakås, sigrihba@uio.no
Odin Crisander Stokkeland, odincs@uio.no
Tarun Sharma, taruns@uio.no
Nikolas Monssen Ebbesberg, nikolae@uio.no

Area of "interaction with AI" we are interested in

We have chosen the area:
"AI and personal life": with smart assistants such as Google Home and Siri.

Voice-based digital assistants (VBDA) are becoming increasingly popular in our living spaces, in the form of Conversational Artificial Intelligence (AI) backed products like Amazon Alexa, Google Assistant, and Apple Siri. They rely on vast amounts of personal information to make the user experience as bespoke as feasibly possible, but this reliance also introduces some concerns regarding how sensitive consumer data is collected, stored, and used (Vimalkumar et. al, 2021)

Questions we want to address

We currently have three questions we want to explore and address during the course:

Do people trust smart assistants such as Google Home and Siri to be in their homes?

- The presence of a microphone in your home that could be recording at any moment, could understandably be met with skepticism. But does that skepticism outweigh the potential usefulness that a smart assistant could introduce to a home? Do users trust companies to keep the potentially vast amounts of information safe and away from prying eyes?

If not - How can one make users more comfortable keeping them in their homes?

- Can eventual user skepticism be remedied?
- If so - what are they, and how could they potentially be implemented

What are the ethical challenges of these smart assistants and having them in the home?

- We wish to narrow this question down a bit further in the future.
- But we do want to explore the ethical challenges of the technology of smart assistants; and more specifically in terms of what they are.

Methods for addressing said questions

Interviews

Interviews are qualitative and can give a good in depth insight of stances and experiences of the subjects. The results can give a deeper understanding of few participants, rather than reaching many, and thereby does not provide an option for statistical insight (Nordbø, 2017, p. 81). Every interview provides different data and will be difficult to compare across the different interviews (Portigal, 2013 in Nordbø, 2017, p. 81).

Questionnaire

Quantitative data collection is a method used in the collection and analysis of quantitative data. This is data that is available in a structured form. Quantitative studies include many respondents. It can be difficult to find enough respondents for the results of the survey to be valid. We are thinking of using a survey as a quantitative method for data collection (Preece, Rogers and Sharp, 2019, ch. 8.5).

Triangulation

Triangulation is the use of different methods of data collection to obtain different views and perspectives (Preece, Rogers and Sharp, 2019, p. 264). Our project used both quantitative and qualitative methods for data collection and we thus achieved different insights. However, it can be difficult to compare data from different data collection methods and they can also produce different results.

Previous Research

In the data collection, we want to use both qualitative and quantitative methods, and that we collect both primary and secondary data. Our secondary data is previous research carried out in this area of research on "Interaction with AI".

Literature

Nordbø, T. (2017) *Introduksjon til interaksjonsdesign,* Universitetsforlaget. Oslo, Norge.

Preece, J., Rogers, Y. og Sharp, H. (2019) *Interaction Design, Beyond Human Computer Interaction 5th edition,* John Wiley & Sons, Inc. Indiana, USA.

Vimalkumar, M., Sharma, S., Singh, J. B. og Dwivedi, Y. K. (2021) *Okay google, what about my privacy?': User's privacy perceptions and acceptance of voice based digital assistants*. Tilgjengelig: https://reader.elsevier.com/reader/sd/pii/S0747563221000856 (Hentet: 14. september 2022).