Connecting the dots: An exploratory study of the workings of intelligent voice assistants

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Topic Area:

Intelligent assistants

Topic Proposal:

Voice is the future of brand interaction and customer experience.

Voice control is the next evolution of human-machine interaction, thanks to advances in the field of Artificial Intelligence, Natural Language Processing, Machine Learning, Cloud computing, and the Internet of Things (IoT).

Voice assistants are easy to use and thus there are millions of devices that incorporates them in households nowadays.

The purpose is to study how voice assistants and smart speakers actually work.

Applications:

The reason for choosing this topic is because of the wide range of applications that can benefit from this technology. Almost all applications today need integration with voice assistants for enhanced customer experience. Voice assistants being a natural language interface engage with users like no other interface.

In the last years, the heavy use of smartphones led to the arrival of voice assistants such as Apple's Siri, Google's Assistant, Microsoft's Cortana, and Amazon's Alexa.

Voice assistants use technologies like voice recognition, speech synthesis, and Natural Language Processing (NLP) to provide services to the users. The study will comprise the various technologies that come together as a whole to develop such AI-enabled voice assistants.

Sources:

- https://www.jmir.org/2021/4/e25312/
- https://www.jetir.org/view?paper=JETIR1902381
- https://arxiv.org/pdf/1808.07364.pdf
- https://files.eric.ed.gov/fulltext/EJ1267812.pdf