User Interactions with the Amazon Alexa

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Abstract- *Amazon Alexa is a voice-controlled application that is rapidly gaining popularity. We examined user interactions with this technology, and focused on the types of tasks requested of Alexa, the variables that affect user behaviors with Alexa, and Alexa's alternatives. The results indicate that across all age groups, Alexa was primarily used for checking weather forecasts, playing music, and controlling other devices. Several participants reported using Apple Siri and Google Now applications in addition to Alexa for similar, purposes except for controlling other devices. Alexa uses over the weekends were more frequent than on weekdays, but its overall usage tended to decrease over time. The users reported being satisfied with Alexa even when it did not produce sought information, suggesting that the interaction experience is more important to the users than the interaction output. a control interface for smart home devices, or, simply, a new toy.*

Keywords- Human computer interaction; internet; libraries; software agents; speech recognition; Flask; python; voice assistants

I. INTRODUCTION

The Amazon Alexa is a voice-controlled application developed by the Amazon company for its Echo, Echo Dot and recently introduced Echo Show devices (Amazon, n.d.). Being marketed as an intelligent personal assistant (IPA), Echo/Alexa is reportedly used for playing music, answering general questions, setting alarms and timers, or controlling networked devices (Amazon Developer, n.d.; Levin, 2016; Ong and Suplizio, 2016). Recent industry statistics indicate rapid adoption of this technology manifested in the sales figures that raised from 2.4 million units in 2015 to 5.2 million in 2016 and predicted 24.5 million units by the end of 2017 (Dunn, 2016b; PRNewswire, 2017).

Due to the novelty of the IPA technology, most of the information about Alexa's adoption comes from industry reports, and very few scholarly studies tend to focus on IPA evaluation (Ong and Suplizio, 2016). In an effort to increase our understanding of user interactions with IPAs, we examined Alexa on the Echo device usage by its owners in a natural setting of their homes.

II. LITERATURE REVIEW

A. Alexa and other intelligent personal assistance (IPA) technology Intelligent personal assistants (IPAs), also frequently referred to as digital personal assistants, virtual personal assistants, voice-controlled or conversational agents, trace their history to the early handheld computers that were designed to store information (e.g. contacts, calendars) and perform simple tasks (calculations, messaging). Early examples of the IPA devices included Psion's the Organizer (Center for Computing History, n.d.), Apple Newton (Center for Computing History, n.d.), IBM Simon (Microsoft, n.d.) and Nokia 9000 the Communicator (Nokia, n.d.).

B. Python is a web development platform, which provides a programming model, a comprehensive software infrastructure and various services required to build up robust web applications for PC, as well as mobile devices.

C. PyCharm or Anaconda is used to write native code and managed code supported by Microsoft Windows, Windows Mobile, Windows CE, .NET Framework, MAC OS, Linux.

D. Python libraries provide inbuilt functions to develop a code. The PyCharm integrated debugger supports both source and machine-level debugging. PyCharm includes other built-in tools, like a form designer, which is useful when building GUI applications; a Web designer that creates dynamic Web pages; a class designer that is used to create custom libraries, and a schema designer for database support

III. STUDY FINDINGS

A. In order to understand user interactions with Alexa and extend previous research on IPA adoption, we developed the following research questions:

RQ1. What are the common types of interactions between Alexa and its users?

RQ2. What variables affect user interactions with Alexa?

RQ3. Do participants use other types of IPAs, and if so, what do they use them for?

The data to answer the research questions were collected via an online demographic questionnaire, an online diary, and email

B. Admin is an entity that will manage entire system. Admin have must authorized. Admin have all rights to performing any type of given rights to the given user because they will have highest level of access the rights. Admin have under observation of some areas like database, security, integration andmanagement.

C. The minimum hardware requirement is Memory of 4 GB RAM or more, Monitor resolution of 1024*768 or highest access, Intel Pentium 4 or AMD Athlon 2 GHz (or more faster), 1 GB (or more) available hard diskspace.

III. FUTURE ENHANCEMENT

Voice assistants have the potential to radically change how users interact with computers. For many users, the ability to read and type is a barrier to accessing information. Voice assistants can bridge the information gap for those users. Recent research has shown that voice assistants can benefit dementia sufferers by providing an ever-present voice that can answer the same questions again and again without losing patience and offer encouragement when needed.12 For others, reading the instructions their physician provides can be difficult. Building these abilities into currently available consumer technologies would be much more cost effective than a purpose-built device, and many users would already be comfortable operating these devices. Voice assistants could also read books and other long-form documents to users.

IV. CONCLUSION

The complexity and accuracy of voice recognition technology and voice assistant software have grown exponentially in the last few years. Currently available voice assistant products from Apple, Amazon, Google, and Microsoft allow users to ask questions and issue commands to computers in natural language. There are many possible future uses of this technology, from home automation to translation to companionship and support for the elderly. They should also explore the possibilities for providing library materials via voice assistants as the technology matures.

ACKNOWEDGMENT

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