

## **Designing AI Agents: Key Factors that Impact Users' Acceptance**

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AI agents, such as Apple Siri, Google Assistant, Microsoft Cortana and Amazon Alexia, have changed the ways consumers interact with technologies. These conversational platforms could become our primary means of interacting with AI. Drawing on the theoretical technology acceptance model (TAM), this paper aims to investigate the key factors that would affect users' experiences with these AI agents. 1) Usability will positively impact consumers' intentions to use AI agents. Usability has been shown to be a key attribute of online services and a key driver of service use (Massey et al., 2007). For AI agents, the quality of conversational output in response is especially important. 2) Computing resource and network constraints will negatively impact consumers' intentions to use AI agents. Computer resource (i.e. hardware and software) requirement reflects the extent to which users need to expend effort on acquiring the necessary computer resources to use a service (Venkatesh et al., 2012). AI agents are extensively deployed on mobile computing devices as well as traditional desktops and laptops. Network bandwidth and reliability are also important facilitating resources to use AI agents. The absence of computing and network resources represents barriers to using this interactive technology. 3) Security and privacy provision will positively impact consumers' intentions to use AI agents. There are growing concerns that users are putting their privacy at risks while having conversations with these AI agents, which store and analyze voice inputs through speech recognition and machine learning. Therefore, effective security mechanisms are required for protecting users' privacy on these AI platforms.

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