

MSIT-Privacy Engineering Capstone Presentations

Sponsored by Facebook — Presented by: Clare Hsu, Lewei Li, Daniel Mo

Low digital literacy users, who are generally not familiar with digital skills and Internet technologies, are forced to join in the current trend of online payment and social commerce under this COVID-19 situation. However, compared to general users, their lower awareness, less concerns, and more misconceptions could make them more vulnerable in terms of privacy. In this talk, we will present a design of privacy education for low digital literacy users under the context of data practice policies on Facebook Pay, addressing their potential privacy concerns, misconception towards existing data practice policies, and absence of privacy self-efficacy. We will also discuss the evaluation result of our design based on qualitative responses we collected from interviews, and propose several recommendations for current education design.

Sponsored by Elektra Labs — Presented by: Dev N. Patel, Yash D. Mehta, Ziyuan Zhu

IoT is a rapidly growing industry and it is becoming increasingly difficult to keep up with the advances in the industry. These advances have also led to a large increase in the number of devices available in the market, which makes it difficult for consumers to compare and make a decision about which device to purchase. Elektra Labs is a startup focused on providing comprehensive information about medical IoT devices, such as research evidence and security, through an interface which makes it possible to find information easily and compare it with other similar devices, the target audience being clinicians, medical researchers who might be interested in purchasing the device for their study, their research subjects or even consumers interested in a device for personal use. In this presentation, we describe our efforts to select the information that should be displayed to the target audience through a multi-layered label. We also present a questionnaire that would be given to device manufacturers to provide the information that would be displayed on the label. We tested both, the questionnaire and the label with some device manufacturers and medical researchers respectively. We also include our findings from these user test in this presentation.

Sponsored by: Highmark — Presented by: Chenxiao Guan, Chenghao Ye, Yigeng Wang, Fangxian Mi

People are accustomed to letting voice assistants complete daily tasks for more convenience, and the purpose of our design is to provide healthcare services to people via voice assistants as well. However, news and studies show many devices have been exposed to record and abuse users' conversations with intelligent voice assistants without consent. Thus, we created a consent and authorization voice interface using Alexa Skill based on HIPAA Privacy Rule to guarantee users can handle their protected health information (PHI). We innovated a new way of agreeing to privacy policies and notices via a voice interface, while still maintaining the usability from the user's perspective in a privacy-friendly manner, and simultaneously letting the company-side be in compliance with regulations such as HIPAA. The implementation is meant to strike a balance between usability and privacy-friendliness, and thus we provide a way of configuring fine-grained privacy preferences while making sure the interface is not bloated with too many explanations that annoy our users.