A Spy on Your Wrist. A Privacy Protection Layer for Wearable Devices

Presented by Kambiz Ghazinour

Abstract

With the exceptional advances in wearable devices’ capabilities to monitor users’ daily activities, privacy concerns increase for the smartwatch users who must disclose their sensitive personal information to have access to application services. Studies state that collected information, even in their aggregated form, is sufficient to infer users’ behavior and sharing such information may lead to privacy leakage not expected by the users. This research proposes a privacy-aware wearable framework to protect smartwatch users’ sensitive information. The proposed framework consists of a friendly user-interface and an access control model. The user-interface is designed to allow smartwatch users to express their privacy preferences for each application and the access control model is developed to enforce privacy policies as defined by the data collector and smartwatch users. We have performed use case studies to show the usability and effectiveness of our framework.

Biography

Kambiz Ghazinour is an Assistant Professor and Director of the Advanced Information Security and Privacy (AISP) Lab at the Computer Science Department, Kent State University. He has been actively involved in the area of security and privacy for almost a decade and has received the title of Privacy Ambassador due to his research and activities in promoting privacy-aware models. Dr. Ghazinour has combined his passion for security and privacy with the area of machine learning and data mining to monitor and detect privacy breaches and recommend better privacy practices for the users whose information is widely (and mostly unintentionally) available throughout the Web.