

The Mobile Phone as a (Massive) Data Collection Platform

The massive proliferation of mobile phones paired with current trends in sensor fusion and machine learning provide enormous potential for in situ data collection on scales previously not possible. In this talk, I introduce the MyExperience tool, an open-source data collection platform for mobile phones that gathers sensor data and user-response survey data in the field. To illustrate the tool's potential, I highlight four field studies that leverage different aspects of MyExperience. For example, the "Vote with Your Feet" project studied the relationship between travel patterns and place preferences using cellular signals for motion detection and user surveys for preference inquiry. MyExperience is increasingly being used in the healthcare space as well. It is currently deployed in a three month study exploring how mobile phones may be used to increase personal awareness about fitness habits. For each study discussed, I emphasize how sensors are used to automatically derive knowledge about the user and how self-report is used to account for limitations in sensing and inference. I close the talk by discussing how MyExperience is being updated to support longitudinal studies with large subject pools.



Jon Froehlich is a doctoral student in computer science and engineering at the University of Washington. His primary research interests lie at the intersection of human-computer interaction and ubiquitous computing. He is particularly interested in building and studying interactive technology that addresses high value social issues such as computer accessibility, global warming, and healthcare. In 2004, he received his MS in Information and Computer Science from the University of California, Irvine where he was advised by Paul Dourish. His PhD advisor is James Landay at the University of Washington.