Demo: AWSense – A framework for collecting sensing data from the Apple Watch
Katrin Hänsel, Hamed Haddadi, Akram Alomainy
Electronic Engineering And Computer Science – Queen Mary University, London

**Introduction**
- **Sensing Library** for iOS and Apple Watch
- Easy sensor access from Apple Watch
- Supports data transmission to Phone via own protocol
- configurable

**Available Sensors:**
- **Raw acceleration** (including gravity), configurable up to 100 Hz
- **Device Motion** (computed linear acceleration, rotation rate, gravity and attitude), configurable up to 100 Hz
- Heart rate

**Architecture**

**AWSense Data Types and Sensing:**
- Sensor Types
- Sensor Data Structs
- Configuration of Sensors
- Sensor Data Events

**AWSense Target (Watch only):**
- Sensor Data and Sensing

**AWSense Connect Targets (for Watch and Phone):**
- Buffer Sensing Data
- Send Data to phone
- Message Events for the Watch App

**AWSense Connect Watch Part:**
- Configure Sensing Session on Phone
- Receive Data from Watch
- Store Data in CSV files
- Message Events for the Phone App

**AWSense Connect Phone Part:**
- Communication between phone and watch
- Configuration of Sensors
- Transmission of Start and Stop of Sensing
- Data Transmission

**Available Sensors:**
- **Raw acceleration** (including gravity), configurable up to 100 Hz
- **Device Motion** (computed linear acceleration, rotation rate, gravity and attitude), configurable up to 100 Hz
- Heart rate

**Demonstration**

Apps using the AWSense Framework:
- Real Time Data Presentation
- Data Export
- Use within a psychological experiment

**Where to find it:**
https://github.com/MiezelKat/AWSense