

# **Motion sensor data preprocessing**

## **MODULE**

Chuan Yue - February 19, 2019

## Description

Upon completion of this lab, students should be able to:

Propose ideas for preprocessing or segmenting motion sensor data.

Assessed by the tasks and outputs specified in STEP 1.

Construct a tool to separate the motion sensor data for the typing of each 4-digit PIN.

Assessed by the tasks and outputs specified in STEP 2.

Construct a tool to inspect the correctness of the typed PINs and discard incorrect data.

Assessed by the tasks and outputs specified in STEP 3.

Construct a tool to segment the motion sensor data of each keystroke.

Assessed by the tasks and outputs specified in STEP 4.

Construct a tool to save motion sensor data of different types of keystrokes for all the users.

Assessed by the tasks and outputs specified in STEP 5.

## Outcomes

### **evaluate and synthesize**

Students will be able to construct a tool to separate the motion sensor data for the typing of each 4-digit PIN.

### **evaluate and synthesize**

Students will be able to construct a tool to segment the motion sensor data of each keystroke.

### **evaluate and synthesize**

Students will be able to construct a tool to inspect the correctness of the typed PINs and discard incorrect data.

### **evaluate and synthesize**

Students will be able to construct a tool to save motion sensor data of different types of keystrokes for all the users.

### **evaluate and synthesize**

Students will be able to propose ideas for preprocessing or segmenting motion sensor data.

## **Content**

### **Notes**

Note that the solution manual and the solution materials are not uploaded to this platform based on the suggestion from Kaza, Siddharth (SKaza@towson.edu).

Please contact Dr. Chuan Yue (chuanyue@mines.edu) at the Colorado

School of Mines for the solution manual and the solution materials.

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