Motion sensor data feature extraction

MODULE

Chuan Yue - February 19, 2019

Description

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

Explain the reasons for extracting statistical features from the preprocessed motion sensor data.

Assessed by the tasks and outputs specified in STEP 1.

Develop code to extract simple statistical features in both the time domain and the frequency domain.

Assessed by the tasks and outputs specified in STEPs 2 and 3.

Explain the relationship between time domain features and frequency domain features.

Assessed by the tasks and outputs specified in STEP 3.

Develop code to extract advanced features such as the total energy statistical features.

Assessed by the tasks and outputs specified in STEPs 4 and 5.

Develop code to save the extracted features to a file.

Assessed by the tasks and outputs specified in STEP 6.

remember and understand

Students will be able to explain the reasons for extracting statistical features from the preprocessed motion sensor data.

evaluate and synthesize

Students will be able to develop code to save the extracted features to a file.

evaluate and synthesize

Students will be able to develop code to extract simple statistical features in both the time domain and the frequency domain.

evaluate and synthesize

Students will be able to develop code to extract advanced features such as the total energy statistical features.

remember and understand

Students will be able to explain the relationship between time domain features and frequency domain features.

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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