

Pervasive and Mobile Computing
(Mobil Teknolojiler için Veri İşleme Teknikleri)
BLM5134

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ASSIGNMENT - 2
Library for Time-Domain Features
(Due to 07/05/2018)

You are asked to code a library to extract time-domain features of a given dataset. This library could be written using Java, C, or Python.

Some parameters which should be given by the user are as follows

- The window size
- The overlap ratio
- The sampling frequency
- The type of separator between the raw data

Some time-domain features are listed below. However, these are not the complete list. Please find additional time-domain features.

- Mean
- Median
- Variance
- Standard Deviation
- Skewness
- Kurtosis
- Mean Absolute Deviation
- AR Coefficients
- Waveform Length
- Zero Crossing
- Willison Amplitude
- Slope Sign Change

Please analyze the available datasets(such as activity, transport, etc.) which include raw data. You should customize your library according to these datasets. Generally a dataset consists of rows which include raw sensor data and the class name.

Accx, Accy, Accz, Gyrx, Gyry,Gyrz, Class

0.123,0,546, -1,456, 0.005,0.801, 1, running

.
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.

Or the class name is not included within the records but as a filename

Running.txt

Accx, Accy, Accz, Gyrx, Gyry,Gyrz

0.123,0,546, -1,456, 0.005,0.801, 1

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Please do not forget to run your code on a selected dataset. Your program should produce a file consisting of time-domain features and class name.

ATTENTION

- You should prepare a Java,C, or Python library and submit it via an e-mail to amac@yildiz.edu.tr.
- For e-mail subject and attached file use your name and surname.
- E-mail Subject: **BLM5134_Assignment_2_Name_Surname**
- Attached Filename(s): **Name_Surname.zip**
- **Your zip file should contain the example dataset and the file consisting of time-domain features.**
- Assignments that don't comply with submission rules will NOT be evaluated. "NO EXCEPTION".

