



Medical Software Development Presentation

Exercise 10 Aleksandra Iskrzynska

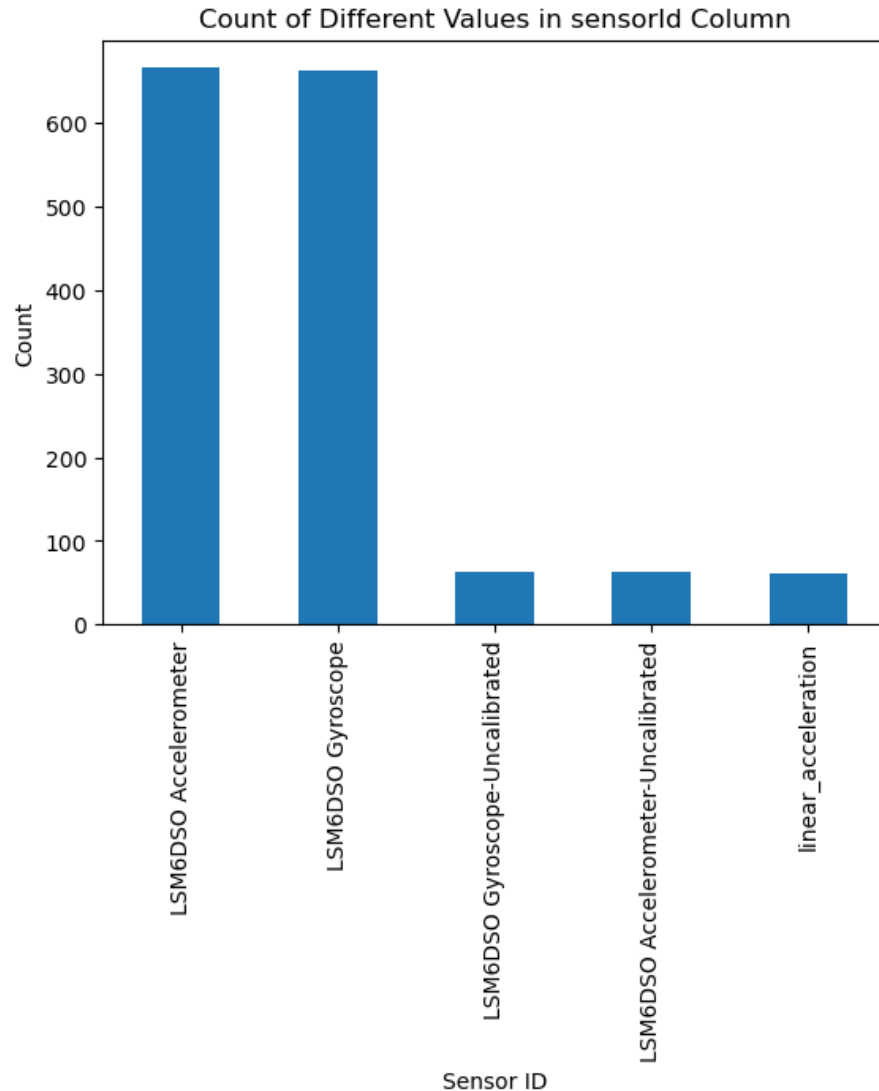
Scientific Question

- The data 'squats_03.json' contains the recording of performing squat exercise
- The **question** arises if through the analysis we are able to:

Detect how many squats were done

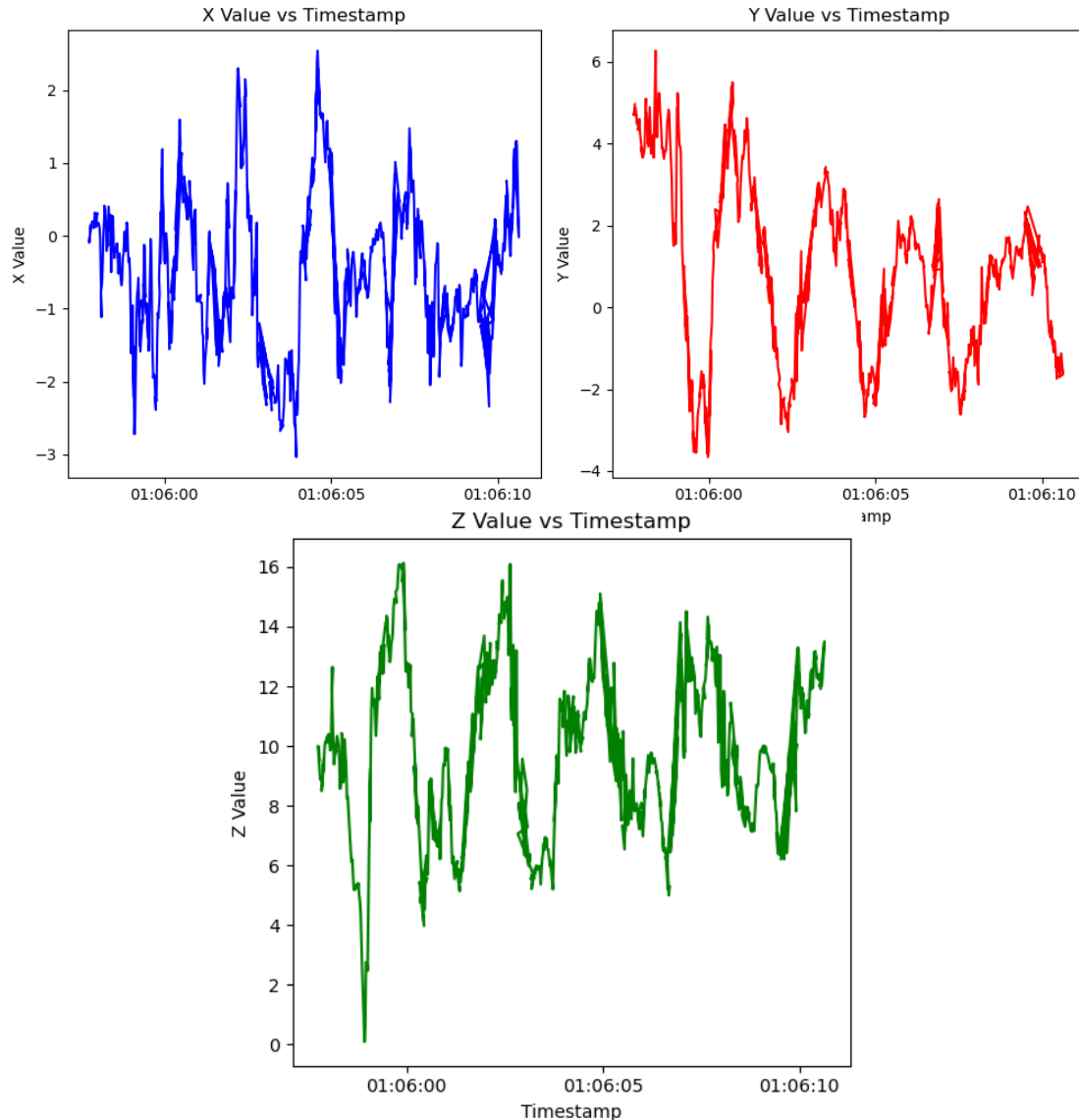
- The answer to the following question could be used in the context of rehabilitation or healthy training.

Sensors used to collect the data



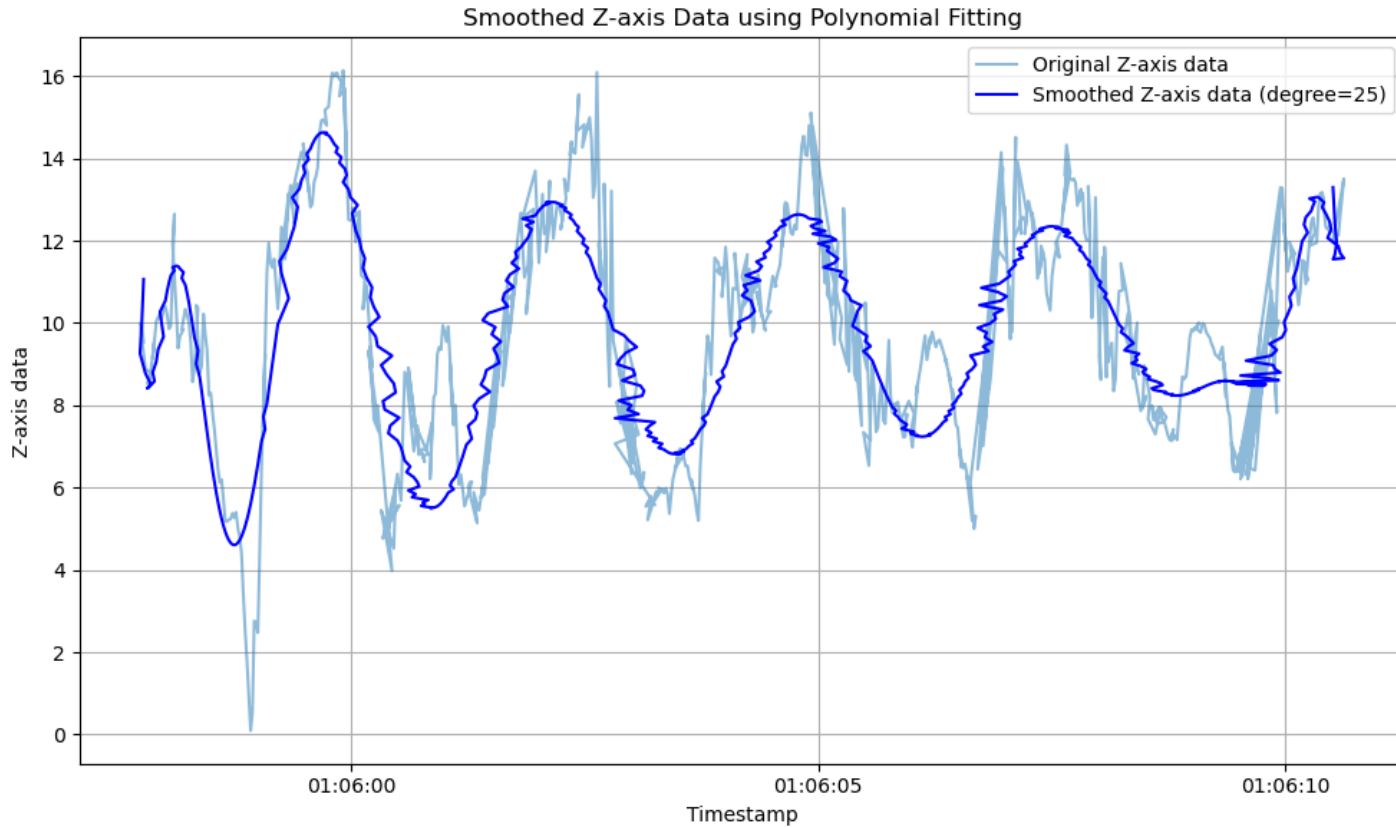
- Taking the amount of data
LSM6DSO sensor was used for
data analysis

Analytics Part



- For a squat we should expect 'rabbit ears' looking like signal in accelerometer
- We could see from Z axis that at least 8 squats were performed, but during the recording 10 were made

Analytics Part



- With polynomial fitting we could have some overview of the number of squats but still more improvements are needed
- Additionally the acceleration could be further analyzed to know if the squats were done at correct speed