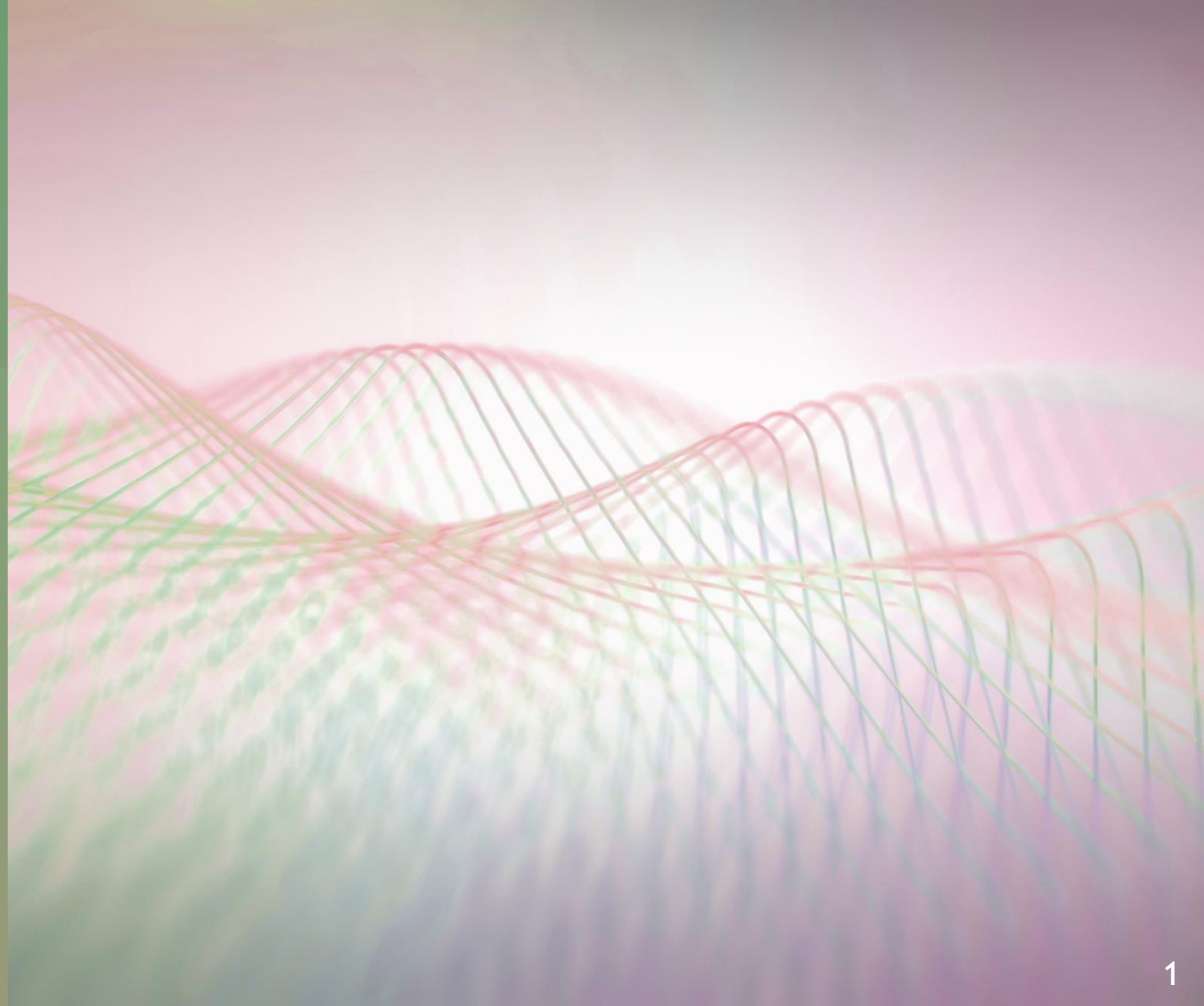
ACTIVEPAL



ACTIVEPAL PROJECT

- Our dataset exist of
  - 41 participants
  - A diary of their activity
  - Accelerometer data over the period of a week
- 2 research questions
  - How do we recognize the intensity of movement?
  - Can we use this knowledge to determine what kind of activity people did?

RESULTS FROM OUR RESEARCH

- Found a possible solution on how to get the MET-value from the acceleration
- Formula to calculate acceleration
- Formula to calculate the MET-value with oxygen uptake and weight

PROBLEMS WE ENCOUNTERED

- The data was inconsistent
- Not all the data was processed

pal_time
15686307069999900
15686307070499900
15686307070999900
15686307071499900
15686307071999900
15686307072499900
15686307072999900
1568630707349990
15686307073999900
15686307074499900

pal_time
16/09/2019 14:29:20.150
16/09/2019 14:29:20.200
16/09/2019 14:29:20.250
16/09/2019 14:29:20.300
16/09/2019 14:29:20.350
16/09/2019 14:29:20.400
16/09/2019 14:29:20.450
16/09/2019 14:29:20.500
16/09/2019 14:29:20.550
16/09/2019 14:29:20.600

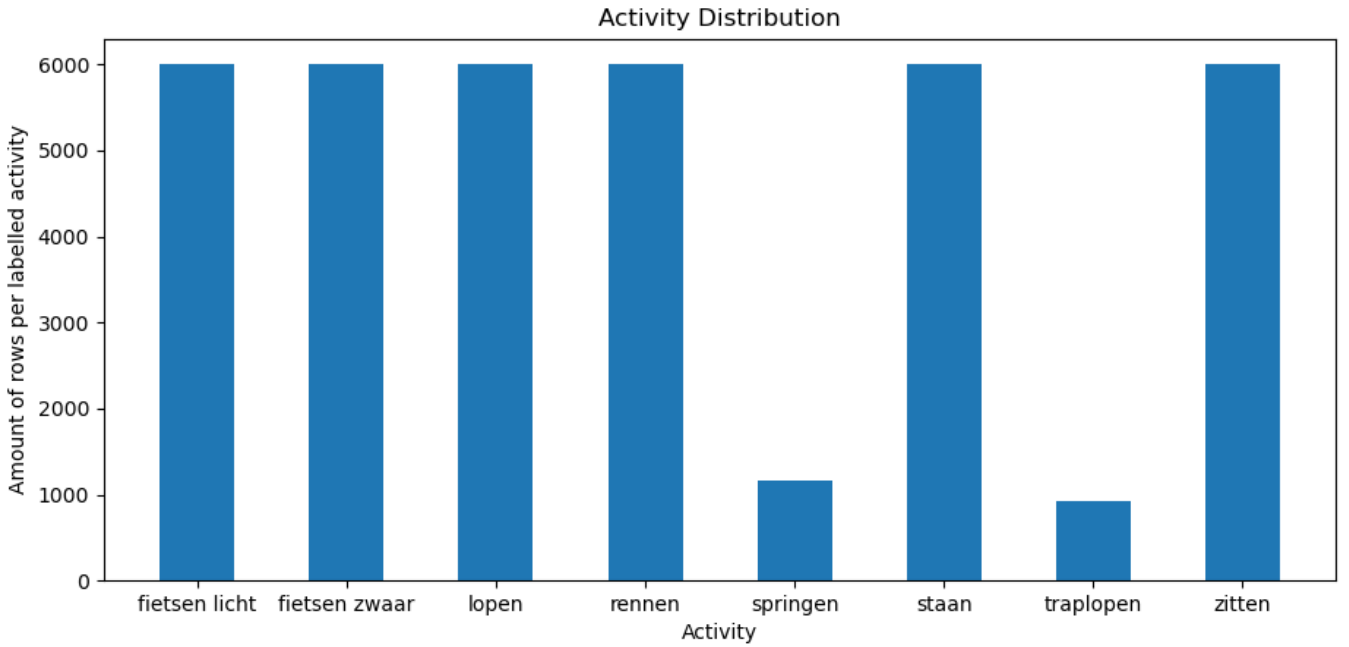
CLEANING THE DATA

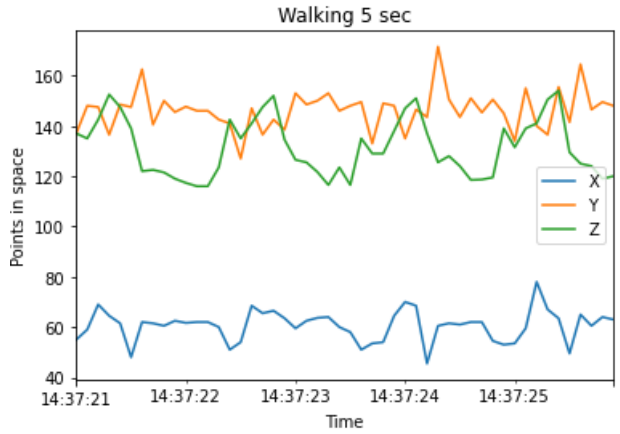
- Decide upon the right datetime format (yyyy-mm-dd hh:mm:ss.ff)
- Getting moving averages by resampling
- Labeling activities in data

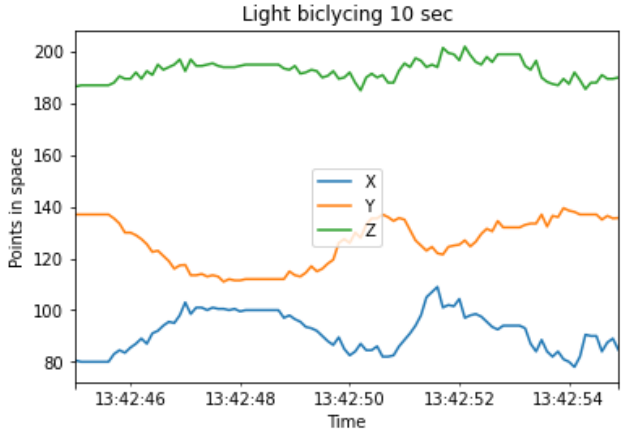
VISUALIZING THE DATA

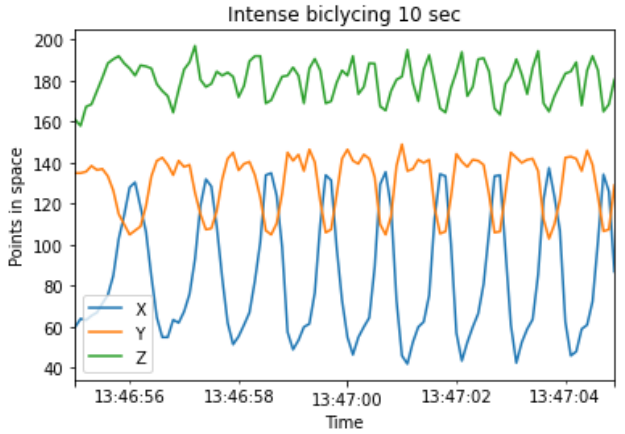
- Plotted activity distribution histogram
- Plotted activities line chart
- Plotted multiple correspondents walking

ACTIVITY DISTRIBUTION



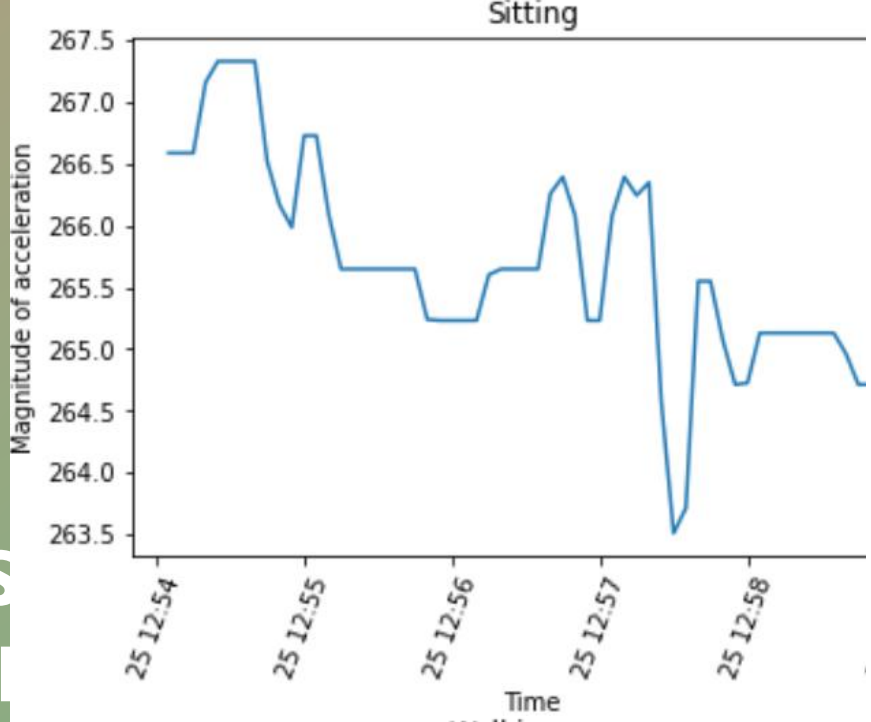


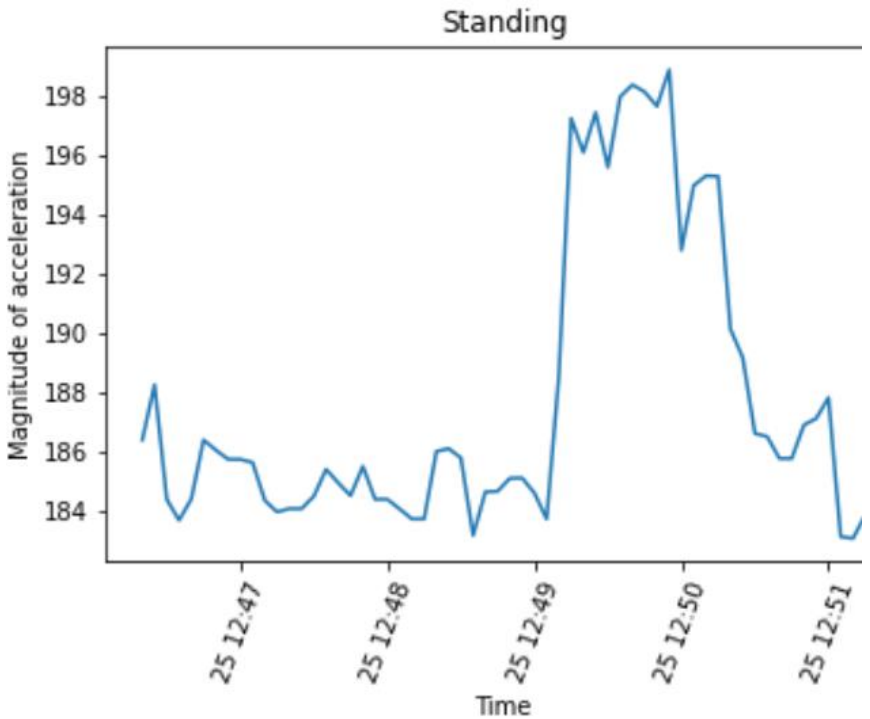


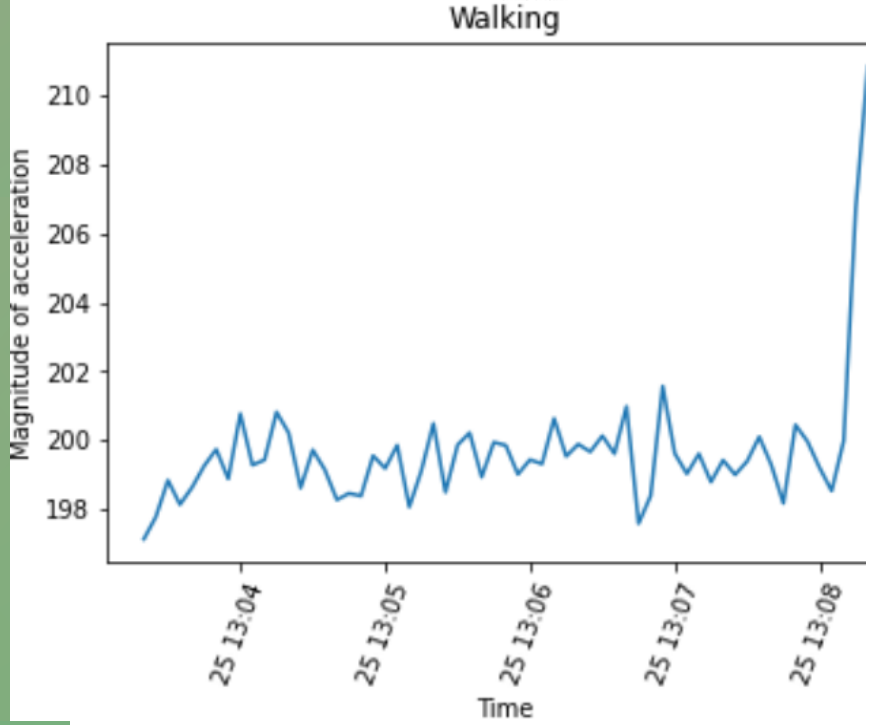


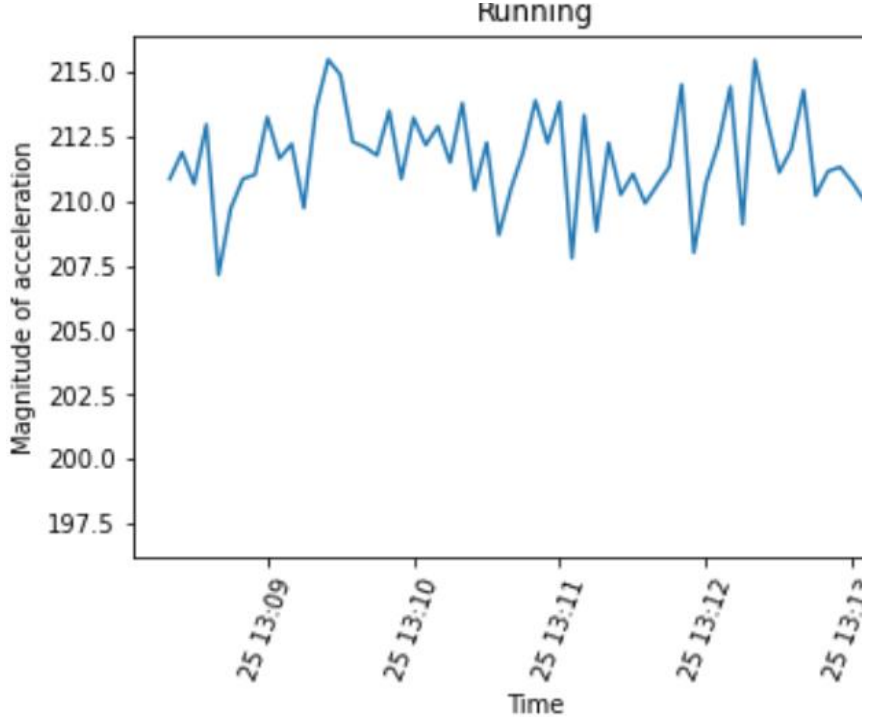
ACTIVITIES X, Y & Z

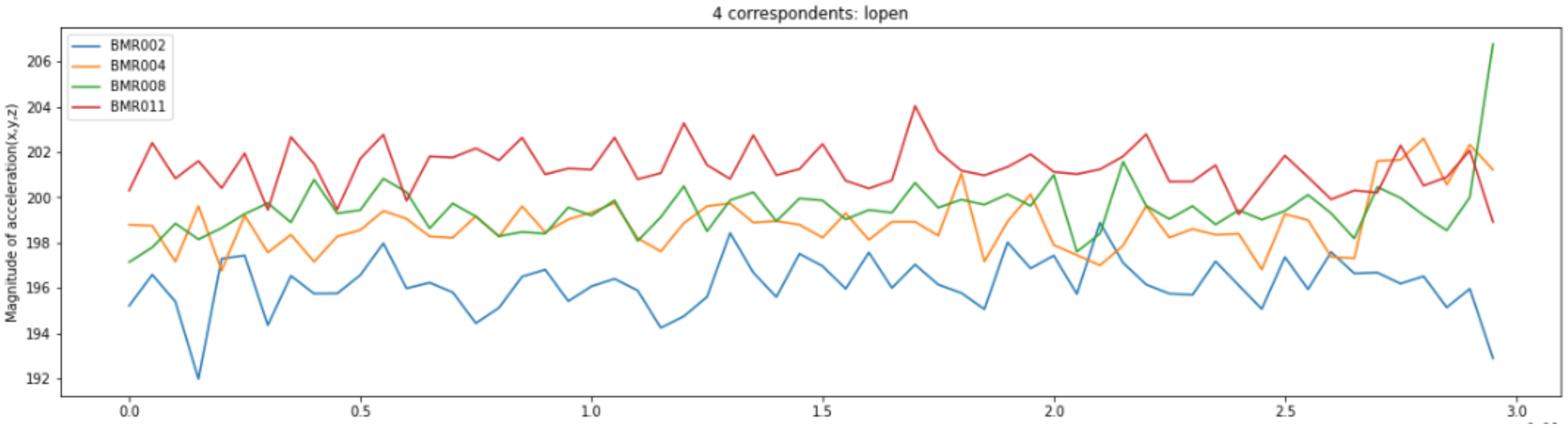
ACTIVITIES
ACCELERATIO



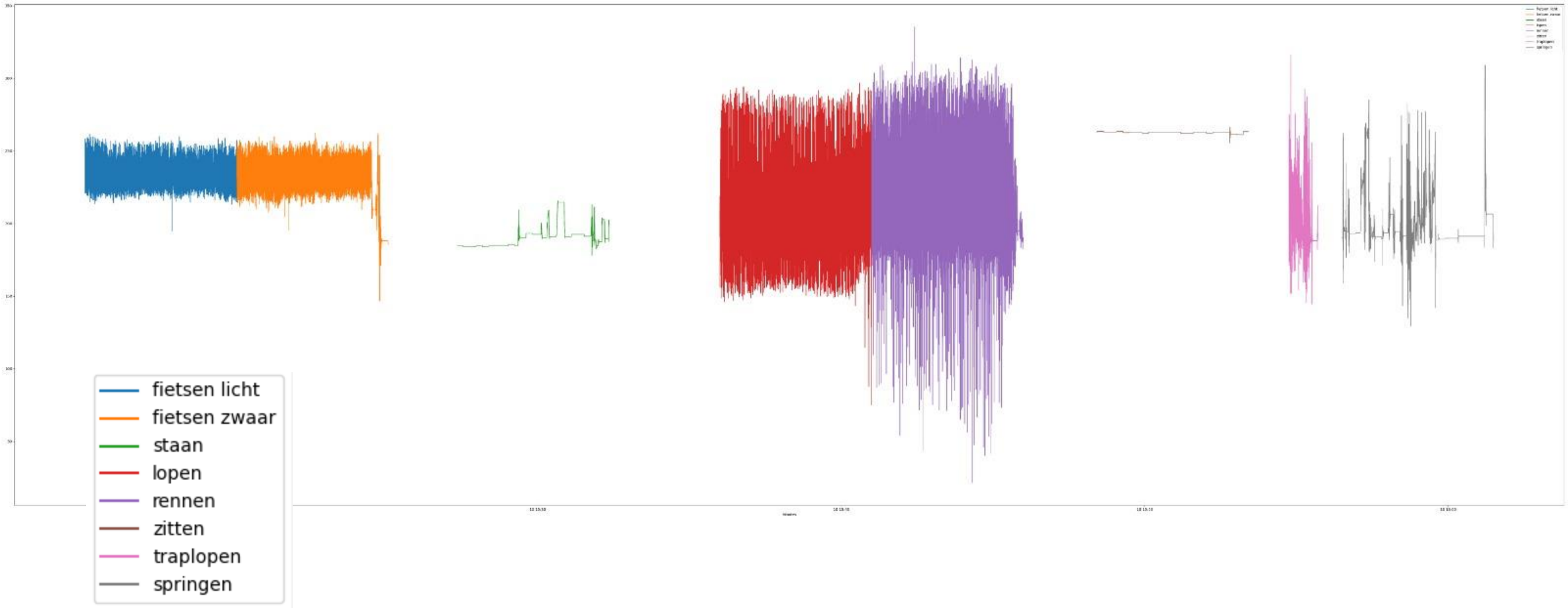








MULTIPLE CORRESPONDENTS WALKING



VISUAL PREDICTION INTENSITY

PREDICTIVE ANALYTICS

- We are currently looking at the following models:
  - Linear regression
  - Multivariant regression

OUR PLANNING FOR THE UPCOMING WEEKS

- Looking for alternative solution to calculate the MET-value
  - Based on activities
- Trying to get a high correlation between the MET-value and acceleration
- More plots!

THANK YOU

QUESTIONS?