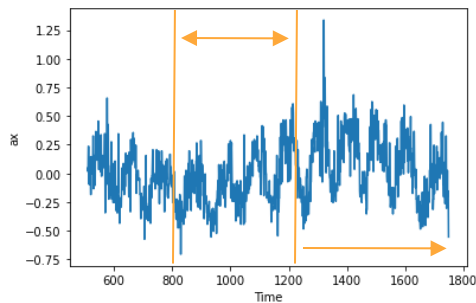# **Sensitive Pen – Corporate Research Project**
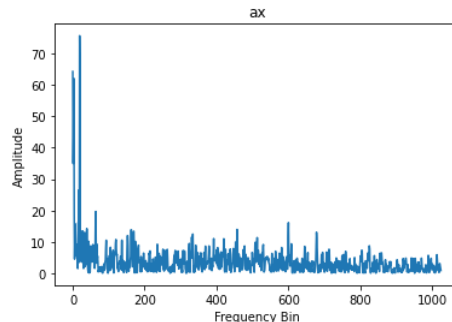## Midterm Presentation

Felix, Johanna , Chiara, Jen and Edouard

Spectrograms – An Image Representation of Time Series
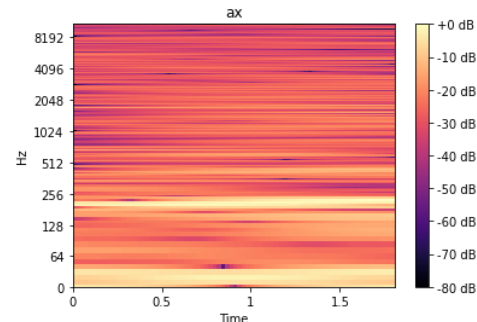
Towards Deep Learning

Time Series
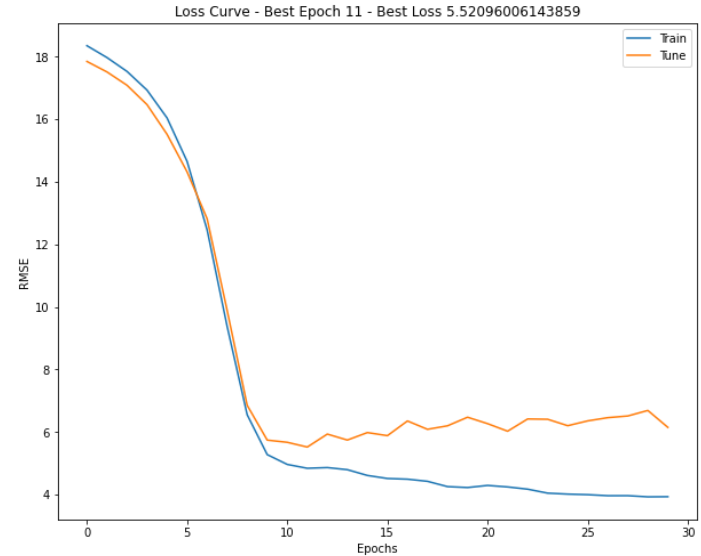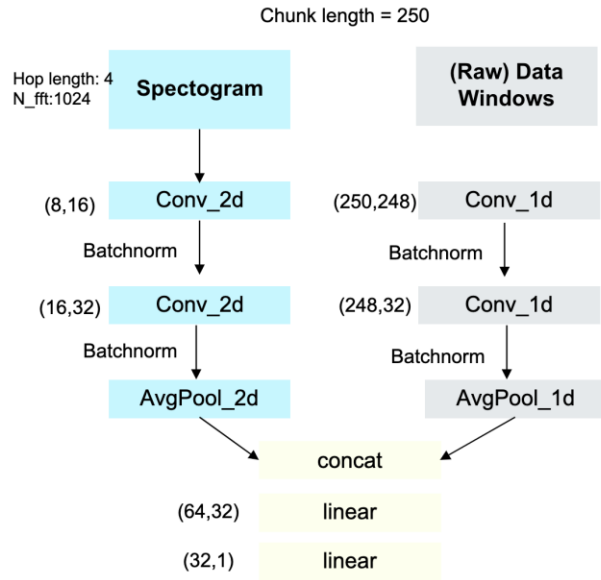

Fast Fourier Transform

Spectrogram

- Time Series can be converted into images while preserving most of their information.
- Opportunity to apply Convolutional Neural Networks to our Signals! Related work in the field motivates this approach.

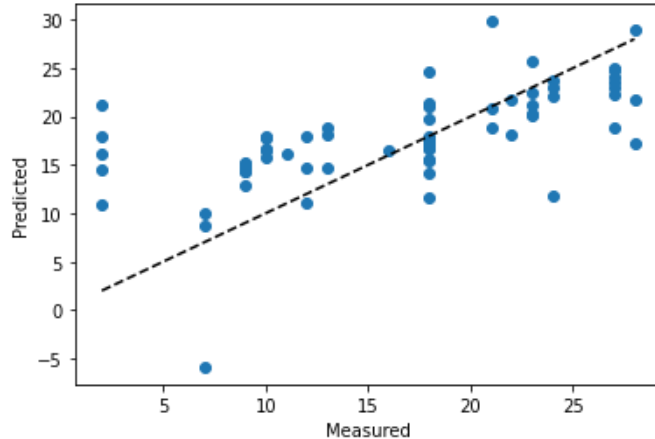# Deep Learning – pen feature model architecture

Pipeline – model implementation

Deep Learning – results and error distribution

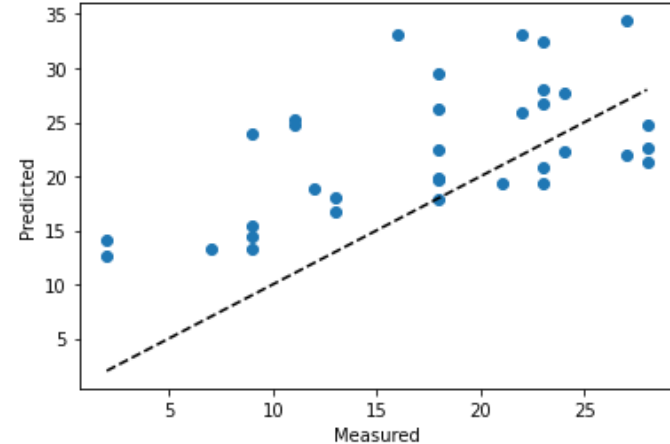## Pipeline – model implementation

Sentence-based BHK prediction distribution

RMSE: **5.2**
(on par with machine learning model
without age normalization)

Loop-based BHK prediction distribution

RMSE: **5.98**