

Unsupervised learning for Eye Movement Classification

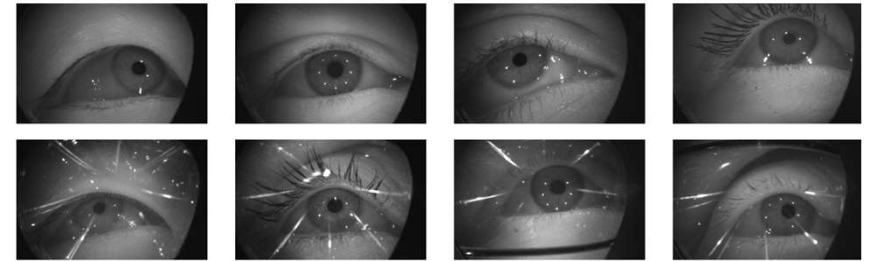
Problem

- 4 types of eye movements
- Primitive Existing algorithms
- Grouping varies a lot between experts/algorithms
- Use deep-neural networks to remove the human factor

Method

- Research into state-of-the-art machine learning models
- Expanding dataset feature size from previous primitive models
- Careful selection of “natural” datasets
- Usage of 3. dimension data
- Usage of powerful machine learning acceleration hardware

Example images from OpenEDS dataset



Current Progress

- Usage of large unlabeled datasets with many features
- Implementation of promising machine learning models
- Good results from testing the models on small scale datasets

Auto-Encoder Test



Dimension-reduced clustering test

