

# Brain Racer

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# Outline

Project

Classification scheme

Experiment pipeline

Results

Discussion



# Problem Description

- Cybathlon: robust zero training classifier
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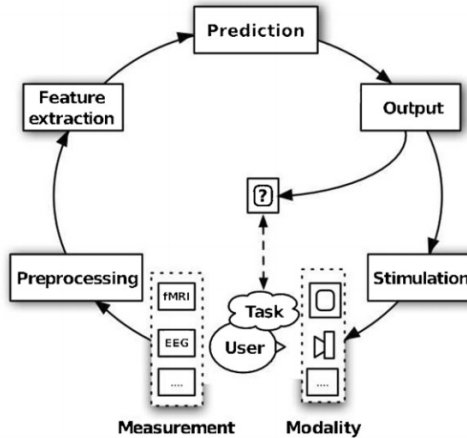


# Foreseen challenges

- Covariant shift
- BCI-performance in general
- Generalisability between subjects
- more stuff



# BCI cycle



# Preprocessing

- List all preprocessing



# Feature extraction

Fourier transform with large bins



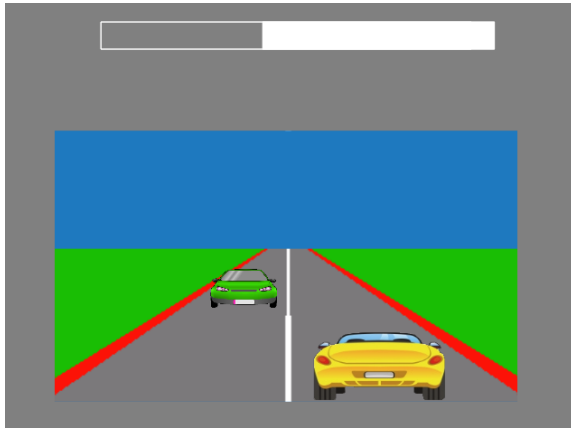
# Prediction

- List all attempted classifiers

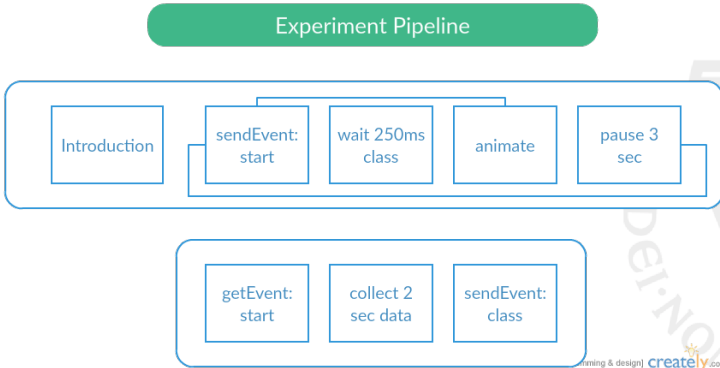




# Stimulation



# Brain racer in Psychopy



animating & design | [creately.com](https://www.creately.com)

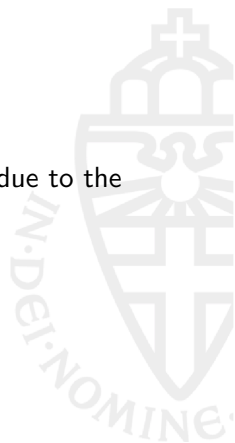
# Results

- Trained on 2  $\rightarrow$  tested on 1
- Cross validated on each itself



# Discussion

- Adaptive approach produced sub-optimal results due to the necessity of unsupervised learning
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## Take home message

The adaptive approach did not work well but decent results were still obtained without training on the specific subject

