ETH

Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

Distributed Computing

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DeepEye: Benchmarking Platform

Deep Learning is inspired by the brain structure. Artificial neural networks are inspired by information processing of biological systems. But can deep learning help us to understand how the brain works?

Typically, these brain signals contain a lot of information, but extracting this information is not trivial. Moreover, these signals differ a lot from subject to other subject and thus it is difficult to build models that generalize well.

In this project we explore the use of brain signals, in particular we want to benchmark our models that can decode all the different machine learning tasks in eeg-based eye tracking. We have investigated all the different tasks such as angle, amplitude, absolute position, segmentation of eye movements based on the EEG data. In this work, we want to benchmark these models and create a platform where people can benchmark their own solutions and compare to each other. In addition, we want to have a playground feature, where users can use pre-installed models and see the behaviour of such models on their own data.

In this project, you will have the opportunity to collaborate with a neuroscientist from UZH and work on a new large dataset for eye tracking with 450 participants.

Requirements: Knowledge in Deep Learning, or solid background in Machine Learning. Implementation experience with TensorFlow or Pytorch is an advantage.

Interested? Please contact us for more details!

Contact

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