



EEG – Eye Tracking: A Wavelet Packets Approach

The collection of eye gaze information provides a window into many critical aspects of human cognition, health and behavior. Brain-computer interfaces can for example be used to decode locked-in patients' brain signals in order to facilitate communication.



The ability to predict a person's eye movement based on brain activity in the form of EEG data offers a variety of applications. In the medical field, it can build a better understanding of diseases; in the psychological domain, the findings and insights are relevant for behavioural researchers. Most generally, mature technology in this area will enable a new interface between humans and machines.

Recent research in this area has demonstrated the feasibility of predicting ET data with a high degree of accuracy from EEG data. The more complex the task under consideration, the limits of existing approaches are being reached.

This thesis will examine the question of how the continuous stream of EEG data can be processed by more traditional mathematical approaches for the purpose of eye tracking.

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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