

# Multimodal Biometric Recognition by EEG and ECG

Projektgruppe “Praxis der Forschung”  
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## 1 Description

Most of the time, when biometrics are used alone, they cannot achieve sufficient recognition accuracy. However, when fused together, their performance significantly increases. Specifically, we aim to fuse electroencephalogram brain activity (EEG) and the heart's rhythm electrical activity (ECG) to have a more reliable recognition system. Since a decent public dataset is already available, we would put more effort into comprehensively analyzing the data.

## 2 Project Roadmap

- Review of the literature on multimodal biometric recognition
- Implement single trait recognition system based on EEG and ECG separately
- Fuse EEG and ECG at different levels to boost overall performance
- Investigate the effect of sessions and channels on the performance of a system
- Conduct a supplementary user study to better understand how people feel about using such systems in the future

We intend to publish the results at a conference.

## 3 Contact

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