# Weekly Work Report 5/9/2025

**This Week:**

* Discussed the working plan for the summer semester with Prof, Mutis, with a primary focus on EEG signal analysis and progressing toward the goal of finalizing the paper by September.
* <https://ar5iv.labs.arxiv.org/html/1602.08225v1>

Vaswani, A., Shazeer, N., Parmar, N., Uszkoreit, J., Jones, L., Gomez, A. N., Kaiser, Ł., & Polosukhin, I. (2017). Attention is all you need. *Advances in Neural Information Processing Systems*, *30*. https://arxiv.org/abs/1706.03762

Emotion recognition using EEG and eye movement signals

(Positive, Neutral, Negative)

EEG: Power Spectral Density (PSD), Differential Entropy (DE) across delta, theta, alpha, beta, gamma bands; Eye: Pupil diameter (mean, std), fixation duration, blink frequency, saccade amplitude, etc.

A table of information

AI-generated content may be incorrect.

A table of negative and negative results

AI-generated content may be incorrect.

* Gained hands-on experience with the **Pupil Player software** and reviewed relevant Pupil Labs documentation.
  + Identified several points that require further discussion regarding the setup and processing of raw pupil data collected during our EEG experiments.

Minimum data confidence: 0.6 (0.8)

Fixation Detector

* Maximum Dispersion [degrees]: 1.5 (1)
* Minimum Duration [milliseconds]: 80 (120)
* Maximum Duration [milliseconds]: 220 (2000)

Blink Detector

* Filter Length [seconds]: 0.2
* Onset confidence threshold: 0.5 (0.6)
* Offset confidence threshold: 0.5 (0.8)

A screenshot of a video player

AI-generated content may be incorrect.



A screenshot of a black screen

AI-generated content may be incorrect.

A screenshot of a computer

AI-generated content may be incorrect.