**Introduction**

This study examines the prospect of augmenting working memory performance through closed-loop, personalized neurostimulation.

**Biomarkers and prediction workflow**

The raw ECG signal (256 Hz) and performance data (block-wise) are recorded during the experiment and subject to an exhaustive feature extraction workflow.

**Methods and protocol**

We recruited 30 participants (15 female) from the university student pool, who were cast into counterbalanced groups for anodal, sham, and control conditions on separate days (in progress).

**Observations with tDCS**

Fig. 6: (a) Performance across three stimulation conditions. Marked decrease during the Control condition in performance accuracy. Sham shows more variability in performance compared to Anodal. (b) Subjective response trends across the three conditions – Effort, Fatigue, and Discomfort.

**Current efforts**

Geared towards the completion of data collection, with focus on – 1. differentiating between the effects of tDCS and familiarization; 2. robustness and online predictive power of HR/V; 3. algorithmic sensitivity to group or individual differences; and 4. the role of cognitive indices.