



Module PMRF-ISSS114/2024

Methods in neuroscience-1

Name of the PMRF student

Atharva Modi

Required background of the students taught

Self-motivated interest in neuroscience is highly recommended

Familiarity with python is preferred but can be worked around

Details of the content of the module

1. Creating python workbook for Fiber photometry analysis

2. Creating python workbook for spike sorting analyses of electrophysiological data

The course content is very practical and will cover the following theory only in the context of the above intended application

Statistics

Confirmatory Vs Exploratory analysis

Hypothesis testing

Parametric statistical tests

Non-parametric statistical tests

Confidence intervals,

sampling & bootstrapping

ANOVA

Correlations, partial correlations and multiple comparisons

Others:

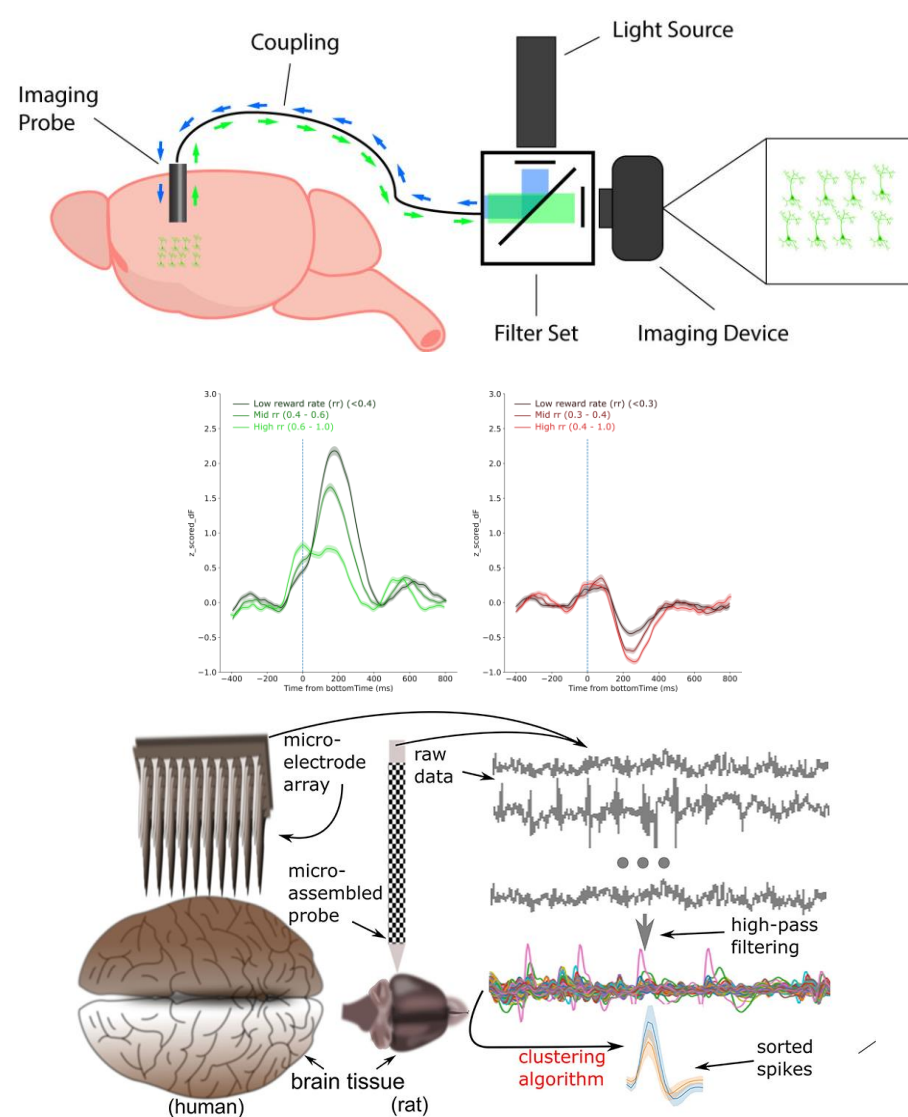
Band pass filtering

Peak detection algorithm (MAD)

PCA / SVD

Clustering algorithms

Template matching



Schedule of the module

Start date: 4th February 2025

End date: 25th April 2025 (tentative)

Schedule: Every **Tuesday, Friday 6:00-7:30 PM**

Meeting link : Will be shared later

Contact email ID: iss.forum@gmail.com

Registration link:

<https://forms.gle/iKh6n1hAafcKX5N96>