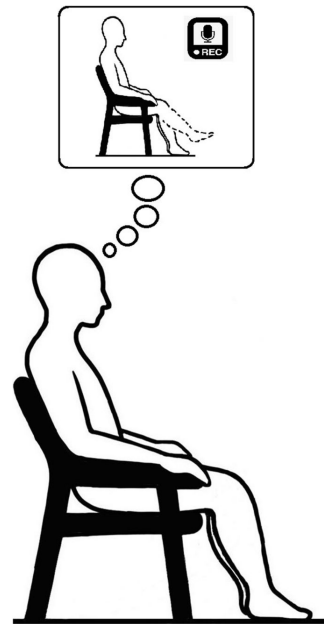


# EEG Data Classification

Arshad Badfar

# Introduction



## **Statement of project objectives**

Primary:

Develop a EEG Data Classification System

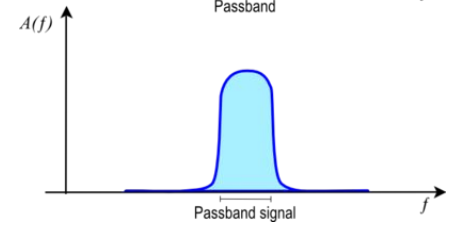
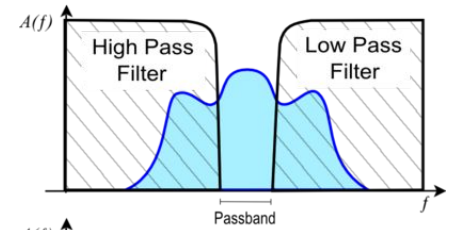
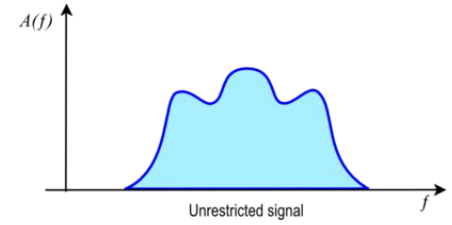
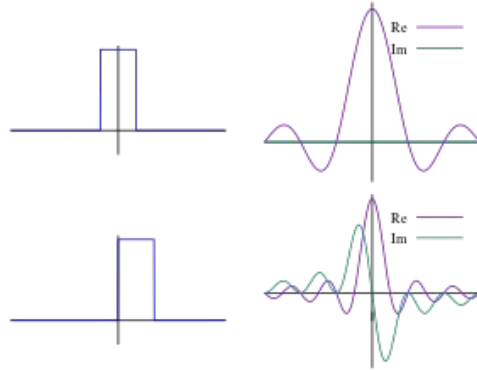
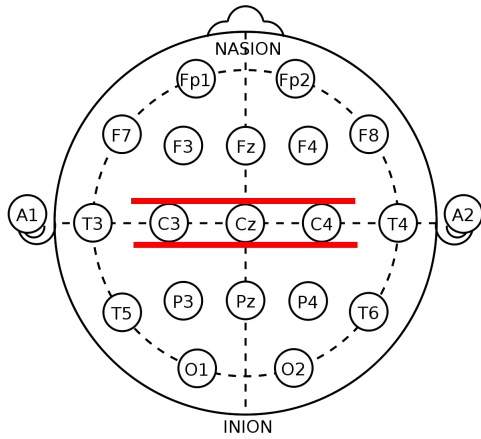
Secondary:

Facilitate Brain-Computer Interface (BCI) Development

## Approaches

- Data Collection:
  - Gather data using openbci EEG devices
- Data processing/feature selection:
  - Selecting relevant channels
  - Applying bandpass filtering to get the desired data
  - Using CSP to enhance information to noise ratio
- Classification Model:
  - Using LDA to have a binary classification

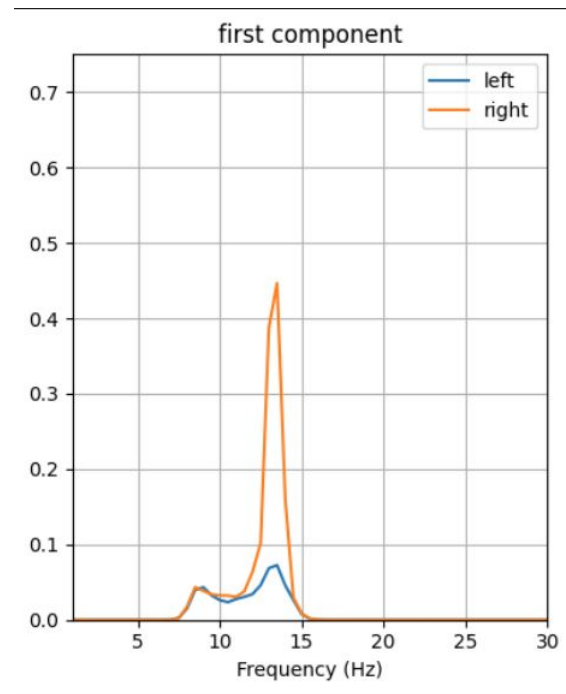
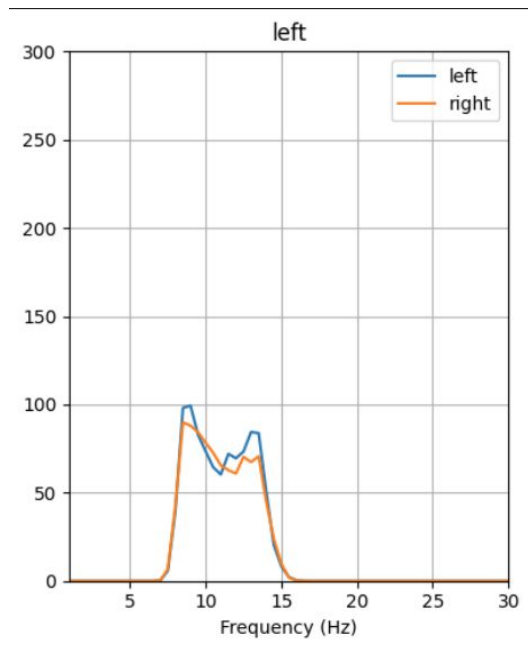
# Features



## **Deliverables**

- Trained Model
- Confusion Matrix
  
- Reports and codes: Explanations of what the outputs might involve and codes for each sections

# CSP

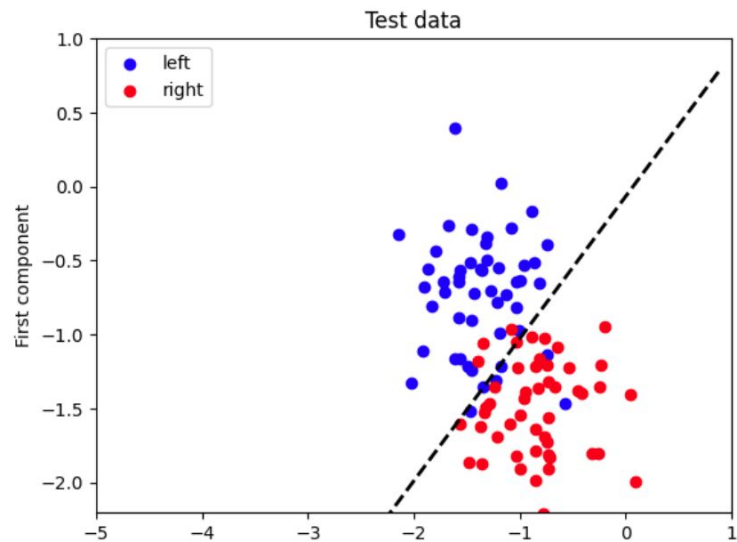
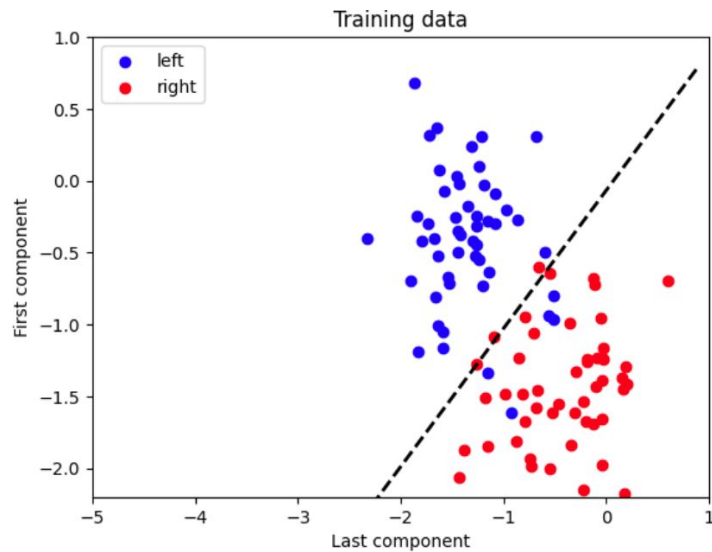


## Evaluation Methodology

- Splitting data to train and test
  - Apply the model
    - Confusion matrix
    - Accuracy



# Results



Confusion matrix:

```
[[45  4]
 [ 5 46]]
```

Accuracy: 0.910