## How It Works

1. **Data Preparation**
    a. 16 participants with accuracy (%) and reaction time (s).
    b. Data cleaned and converted to numeric format.
    c. Labels assigned manually based on thresholds:
        i. Label `1`: Accuracy ≥ 90% and ReactionTime ≤ 1.5s
        ii. Label `0`: Otherwise
2. **Statistical Features**
    a. Prints summary statistics (mean, std, min, max, quartiles).
3. **Machine Learning Models**
    **a. Neural Network (MLPClassifier)**
    **b. Random Forest Classifier**
    c. **XGBoost Classifier** (if installed)
4. **Evaluation**
    a. Each model is trained on training data and tested on unseen data.
    b. Confusion matrices are generated and saved as images:
        i. `Confusion_Matrix_NeuralNet.jpg`
        ii. `Confusion_Matrix_RandomForest.jpg`
        iii. `Confusion_Matrix_XGBoost.jpg`
5. **Visualization**
    a. Scatter plot of participants showing labeled groups (`Data_Visualize.jpg`).

## Outputs

- **Confusion matrices** for each model
- **Performance visualization** of participants (accuracy vs. reaction time)