IIVP Project Topic:
State Recognition using EEG Signal

Group No. 1

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INSTRUCTIONS

Requirements:

1. OS: Linux
2. RAM: Min 8GB
3. Jupyter Notebook
4. python3
5. pip
6. numpy
7. pandas
8. sklearn
9. matplotlib
10. PIL
11. scipy
12. sys
13. os
14. lightgbm
15. nltk
16. csv

Installation

1. Python3

   ```
   sudo apt-get install python3.6
   ```

2. Jupyter Notebook

   ```
   python3 -m pip install jupyter
   sudo apt install jupyter-core
   ```

3. Pip

   ```
   sudo apt-get install python3- pip
   ```

4. Numpy

   ```
   pip3 install numpy
   ```

5. Matplotlib

   ```
   pip3 install matplotlib
   ```

6. pandas

```
pip3 install pandas
```

7. sklearn

```
pip3 install sklearn
```

8. PIL

```
pip3 install Pillow==2.2.2
```

9. scipy

```
pip3 install scipy
```

10. lightgbm

```
pip3 install lightgbm
```

11. nltk

```
pip3 install nltk
```

12. csv

```
pip3 install csv
```

Instructions to run code:

1. Download the zip folder of the project.
2. Unzip Project.
3. Install all the requirements using :
   pip3 install -r requirements.txt
4. Run the program for feature extraction which will generate the out.csv file using :
   python3 code/EEG_feature_extraction.py
5. Now feed the extracted features csv to feature selection program and SVM & KNN classifier program.
6. For running the programs open the ipynb file in vs code or google colab and then run the code.(Please mention the correct path for out.csv file)
7. Results will be displayed.

Expected time to run code: 45 min (SVM.ipynb), 5 min (KNN.ipynb)

Link for viewing the live video of Project demonstration