Directions for Help:

**OverLeaf Link**: https: <https://www.overleaf.com/project/5ecbce3c16f5dd00014b85d0>

**Prior Work (Research Paper) Link** : <https://arxiv.org/pdf/1904.07312.pdf>

##### Section 4 in report on ‘Proposed Methodology’ is made from Preprocessing\_&\_Feature\_Extraction.ipynb notebook

*Input*: Alert and Drowsy Videos

*Output*: Label+features

1.1) 6\_Participants\_ In\_First\_Zip\_File.csv

1.2) 5\_Participants\_In\_Fourth\_Zip\_File.csv

1.3) 6\_Participants\_In \_Third \_Zip\_File.csv

1.4) 5\_Participants\_In \_Second\_Zip\_File.csv

All four files were used to create Merged\_data.csv

##### Section 4.4 in report on ‘Feature Normalization’ is made from Normalization.ipynb notebook

*Input*: Merged\_data.csv

*Output*:

2.1) final\_with\_main\_features.csv

2.2) total\_with\_all\_information.csv

##### Section 7.1 in report on ‘Basic Classification Models’ is made from Classification\_models.ipynb notebook

*Input*:final\_with\_main\_features.csv

*Output*:

3.1) 3.1.1) accuracy

3.1.2) f1 score

3.1.3) confusion matrix

3.1.4) ROC

3.2) 3.2.1) ROC Curves

3.2.2) Calibration Curves

3.3.3) comparison of ROC curves

3.3.4) Comparison of calibration curve

##### Section 7.3 in report on ‘Long Short-Term Memory Networks’ is made from LSTM.ipynb

*Input*: final\_with\_main\_features.csv

*Output:*

4.1) ROC Curve

4.2) Calibration Curve

##### 5. For Main\_Code.ipynb notebook

*Input:* final\_with\_main\_features

Additional File Used: Shape\_Predictor.dat

*Output:*

5.1) Live results - Alert or Drowsy

5.2) Curve for state (Alert or drowsy) with frames.