

Model Development Phase Template

Date	14th July 2024
Team ID	SWTID1720243396
Project Title	Panic Disorder Detection
Maximum Marks	4 Marks

Initial Model Training Code, Model Validation and Evaluation Report

The initial model training code will be showcased in the future through a screenshot. The model validation and evaluation report will include classification reports, accuracy, and confusion matrices for multiple models, presented through respective screenshots.

MLP

Model Validation and Evaluation Report:

Model	Classification Report	Accuracy	Confusion Matrix
Multiple Layer Perceptron	<pre> precision recall f1-score support 0 0.96 0.89 0.92 19159 1 0.04 0.10 0.06 841 accuracy 0.86 20000 macro avg 0.50 0.50 0.49 20000 weighted avg 0.92 0.86 0.89 20000 </pre>	0.8570	[[17053 2106] [754 87]]
Naive Bayes	<pre> precision recall f1-score support 0 0.96 0.64 0.77 19159 1 0.05 0.40 0.08 841 accuracy 0.63 20000 macro avg 0.50 0.52 0.43 20000 weighted avg 0.92 0.63 0.74 20000 </pre>	0.6301	[[12268 6891] [506 335]]
GradientBoosting	<pre> precision recall f1-score support 0 0.96 0.90 0.93 19159 1 0.04 0.10 0.06 841 accuracy 0.87 20000 macro avg 0.50 0.50 0.49 20000 weighted avg 0.92 0.87 0.89 20000 </pre>	0.8656	[[17226 1933] [756 85]]
ExtraTrees	<pre> precision recall f1-score support 0 0.96 0.90 0.93 19159 1 0.04 0.09 0.05 841 accuracy 0.87 20000 macro avg 0.50 0.50 0.49 20000 weighted avg 0.92 0.87 0.89 20000 </pre>	0.8700	[[17326 1833] [766 75]]
AdaBoost	<pre> precision recall f1-score support 0 0.96 0.91 0.93 19159 1 0.04 0.09 0.05 841 accuracy 0.87 20000 macro avg 0.50 0.50 0.49 20000 weighted avg 0.92 0.87 0.89 20000 </pre>	0.8711	[[17347 1812] [766 75]]
KNN(with hyper-parameterisation Tuning)	<pre> precision recall f1-score support 0 0.96 0.93 0.94 19159 1 0.04 0.07 0.05 841 accuracy 0.90 20000 macro avg 0.50 0.50 0.50 20000 weighted avg 0.92 0.90 0.91 20000 </pre>	0.8951	[[17846 1313] [785 56]]
SVM(Linear) (with Hyper-parameterization Tuning)	<pre> precision recall f1-score support 0 0.96 0.90 0.93 19159 1 0.04 0.09 0.06 841 accuracy 0.87 20000 macro avg 0.50 0.50 0.49 20000 weighted avg 0.92 0.87 0.89 20000 </pre>	0.8699	[[17319 1840] [762 79]]
Random Forest (With Hyper-parameterization Tuning)	<pre> precision recall f1-score support 0 0.96 0.90 0.93 19159 1 0.04 0.10 0.06 841 accuracy 0.87 20000 macro avg 0.50 0.50 0.49 20000 weighted avg 0.92 0.87 0.89 20000 </pre>	0.8692	[[17302 1857] [759 82]]

