Model Development Phase Template

Date	Nov 30,2024
Team ID	739891
Project Title	Unlocking the Minds: Analyzing Mental Health with NLP
Maximum Marks	6 Marks

Model Selection Report

In the forthcoming Model Selection Report, various models will be outlined, detailing their descriptions, hyperparameters, and performance metrics, including Accuracy or F1 Score. This comprehensive report will provide insights into the chosen models and their effectiveness.

Model Selection Report:

Model	Description	Hyperparameters	Performance Metric (e.g., Accuracy, F1 Score)
SVC	Its ability to handle both linear and non-linear classification problems.	-	Accuracy score=91 %
Decision tree classifier	Simple tree structure; interpretable, captures non-linear relationships, suitable for initial insights into customer segmentation.	-	Accuracy score= 81%
Random forest classifier	used primarily for classification tasks can	-	Accuracy score= 88%

	also solve regression problems		
Ada boost classifier	Is a popular ensemble learning algorithm that combines multiple "weak learners" to create a "strong learner"	-	Accuracy score=82%
Gradient boosting classifier	It improves the model iteratively by minimizing the error of the previous model using gradient descent	-	Accuracy score=86%
Logistic Regression	models the probability of a binary outcome (0 or 1) based on one or more independent variables.	-	Accuracy score=90%