Model Development Phase Template

Date	21 JULY 2024
Team ID	Team-740025
Project Title	Unlocking Silent Signals :Decoding the Body Language With Mediapipe
Maximum Marks	5 Marks

Model Selection Report

In the model selection report for future deep learning and computer vision projects, various architectures, such as CNNs or RNNs, will be evaluated. Factors such as performance, complexity, and computational requirements will be considered to determine the most suitable model for the task at hand.

Model	Description
Gradient Boosting Classifier	Gradient Boosting is the grouping of Gradient descent and Boosting . In gradient boosting, each new model minimizes the loss function from its predecessor using the Gradient Descent Method. This procedure continues until a more optimal estimate of the target variable has been achieved
Logistic Regression Classifier	Logistic Regression is used for binary classification tasks, predicting outcomes like spam vs. non-spam or disease vs. no disease, and it provides probabilities of class membership. It also helps in understanding feature importance and serves as a strong baseline model due to its simplicity and interpretability.
Random Forest Classifier	The Random Forest Classifier is ideal because it combines the strength of multiple decision trees, offering high accuracy, robust performance against overfitting , and the ability to handle large and complex datasets, ensuring reliable predictions in varied shipping scenarios.

Pickle Model	Pickle is used in Python to serialize and deserialize objects, enabling saving and loading of data between program executions. It's commonly used to save machine learning models and other complex data structures. In code, you'd import it with import pickle, and use pickle.dump(obj, file) to save and pickle.load(file) to load data.
Streamlit	Streamlit is a Python library that rapidly transforms data scripts into shareable web apps, eliminating the need for front-end expertise.