**Model Development Phase Template**

| Date | July 2024 |
| --- | --- |
| Team ID | Team-739859 |
| Project Title | Auto Insurance Fraud Detection Using Machine Learning |
| Maximum Marks | 10 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 a summary and training and validation performance metrics for multiple models, presented through respective screenshots.

**Initial Model Training Code (5 marks):**

Paste the screenshot of the model training code

**Model Validation and Evaluation Report (5 marks):**

| **Model** | **Summary** | **Training and Validation Performance Metrics** |
| --- | --- | --- |
| Model 1 | Logistic regression model typically includes accuracy, precision, recall, F1 score to evaluate its predictive performance and generalization capability. |  |
| Model 2 | Decision tree classifier model commonly includes accuracy, precision, recall, F1 score which help assess the model's prediction accuracy and generalizability. |  |
| Model 3 | Random forest classifier model often encompasses accuracy, precision, recall, F1 score to measure its prediction quality and robustness. |  |
| Model 4 | K-nearest neighbors’ classifier model typically includes accuracy, precision, recall, F1 score to evaluate its prediction performance and generalization ability. |  |
| Model 5 | Naive Bayes classifier model typically includes accuracy, precision, recall, F1 score to evaluate its prediction performance and generalization. |  |
| Model 6 | Confusion matrix is used to evaluate the model's performance by showing the actual versus predicted classifications. |  |