**Model Development Phase Template**

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| Date | 10 July 2024 |
| Team ID | 739835 |
| Project Title | Credit card approval prediction using ML |
| 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.

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| **Model** | **Description** | **Hyperparameters** | **Performance**  **Metric (e.g.,**  **Accuracy, F1**  **Score)** |
| Random  Forest | Ensemble of decision trees; robust, handles complex relationships, reduces overfitting, and provides feature importance for credit card approval prediction. | - | Accuracy score =  81% |
| Decision  Tree | Simple tree structure; interpretable, captures non-linear relationships, suitable for initial insights into credit card approval patterns. | - | Accuracy score =  73% |
| Gradient Boosting | ensemble learning technique that builds models sequentially to correct errors made by previous models. It’s widely used for its high performance | - | Accuracy score=  81% |



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|  | in classification and regression tasks, including credit card approval prediction |  |  |
| Gradient  Boosting | Gradient boosting with trees; optimizes predictive performance, handles complex relationships, and is suitable for accurate credit card approval predictions. | - | Accuracy score =  81% |