Model Development Phase Template

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| Date | 05 July 2024 |
| Team ID | 739951 |
| Project Title | Anticipating Business Bankruptcy |
| 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 predicting the bankrupted business | - | Accuracy score = 94% |
| Decision Tree | Simple tree structure; interpretable, captures non-linear relationships, suitable for initial insights in predicting the bankrupted business | - | Accuracy score = 88% |
| Support vector classifier | A Support  Vector Classifier (SVC) is a type of supervised machine learning model used for classification tasks. It is part of the larger family of Support Vector Machines (SVM), which can be used for both classification and regression. SVC is particularly effective for high-dimensional spaces and situations where the number of dimensions exceeds the number of samples. | - | Accuracy score =  64% |