**Model Development Phase Template**

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| Date | 15 March 2024 |
| Team ID | 740012 |
| Project Title | **Predicting IMF-Based Exchange Rates: Leveraging Economic Indicators for Accurate Regression Modeling** |
| 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 | Performance Metric |

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| Random  Forest | Ensemble of decision trees; robust, handles complex relationships, reduces overfitting, and provides feature importance for exchange approval prediction. | Accuracy score =  81% |
| Decision  Tree | Simple tree structure; interpretable, captures non-linear relationships, suitable for initial insights into prediction approval patterns. | Accuracy score =  73% |
| KNN | Classifies based on nearest neighbours; adapts well to data patterns, effective | Accuracy score =  77% |

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|  | for local variations in prediction approval criteria. |  |
| Gradient  Boosting | Gradient boosting with trees; optimizes predictive performance, handles complex relationships, and is suitable for accurate approval predictions. | Accuracy score =  81% |