**Model Development Phase Template**

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| Date | 4 July 2024 |
| Team ID | 740509 |
| Project Title | Honey price prediction based on purity |
| Maximum Marks | 5 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.

**Model Selection Report:**

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| --- | --- | --- | --- |
| **Model** | **Description** | **Hyperparameter** | Performance Metrics(eg:RSquare) |
| Linear Regression | A simple and interpretable model that assumes a linear relationship between the input variables and the target. Suitable for datasets with linear correlations. | --- | R-Square = -3.2502641 |
| Decision Tree | Simple tree structure; interpretable, captures non-linear relationships, suitable for initial insights into loan approval patterns | --- | R-square=0.99999956029 |
| Random Forest | Ensemble of decision trees; robust, handles complex relationships, reduces overfitting, and provides feature importance for loan approval prediction. | Max depth | R2=0.9999956045 |