**Model Development Phase Template**

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| Date | 16 July 2024 |
| Team ID | xxxxxx |
| Project Title | Detection of Autistic Spectrum Disorder: Classification |
| Maximum Marks | 5 Marks |

**Model Selection Report:**

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| **Model** | **Description** |
| Logistic Regression | A linear model used for binary classification. It calculates the probability of a sample belonging to a particular class using a logistic function. |
| Support Vector Machine (SVM) | A classification model that finds the hyperplane that best separates the classes. It can handle non-linearity using kernel functions. |
| Decision Tree | |  | | --- | |  |  |  | | --- | | A tree-based model that splits the data based on feature values to make predictions. It’s easy to visualize and interpret. | |
| Random Forest | |  | | --- | |  |  |  | | --- | | An ensemble method that combines multiple decision trees to improve performance and reduce overfitting. Each tree is trained on a subset of the data | |
| K-Nearest Neighbors (KNN) | A non-parametric method that classifies samples based on the majority label of their nearest neighbors in the feature space. |