|  |  |  |  |
| --- | --- | --- | --- |
| **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 hairloss prediction. | - | Accuracy score =  81% |
| Decision  Tree | Simple tree structure; interpretable, captures non-linear relationships, suitable for initial insights. | - | Accuracy score =  73% |
| KNN | Classifies based on nearest neighbors; adapts well to data patterns, effective | - | Accuracy score =  77% |

**Model Development Phase Template**

|  |  |
| --- | --- |
| Date | 15 July 2024 |
| Team ID | 740017 |
| Project Title | Unveiling Baldness: Genetic And Environmental Dynamics |
| 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.



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