**Model Optimization and Tuning Phase**

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| Date | 07 July 2024 |
| Team ID | 739915 |
| Project Title | BlueBerry Yield Prediction |
| Maximum Marks | 2 Marks |

### Final Model Selection Justification :

The Final Model Selection Justification explains the rationale behind choosing the optimal machine learning model for a given task. This decision is based on a thorough analysis of various models' performance metrics, including Mae,Additionally, factors such as computational efficiency, interpretability, and scalability are considered. The justification ensures that the selected model not only performs well on the test data but also meets practical requirements, making it the most suitable choice for deployment in real-world scenarios.

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| **Final Model** | **Reasoning** |
| XGBoost Regressor | Performs very well across all metrics, with high R-squared (0.988) and low error metrics (MAE, MSE, RMSE). It shows excellent predictive performance and generalization ability. |