

4. One-Page Approach Note

Problem Solving Approach

Started with Exploratory Data Analysis to understand variable distributions and relationships.

Performed missing value imputation and created a new feature Outlet_Age.

Tried Linear Regression as a baseline which resulted in high RMSE.

Implemented Random Forest with grid search but performance plateaued even with increased estimators.

Switched to Neural Networks which showed better generalization and lower RMSE.

Attempted stacking ensemble methods but did not yield significant improvements.

Applied StandardScaler and PCA (retaining 95% variance), which enhanced neural network performance further.

Final submission was made using the model with the lowest RMSE.