

Sales Forecast Evaluation Report

Model Validation:

- **Model used**- Random Forest Regressor with 100 trees
- **Validation Metrics**- RMSE (Root Mean Squared Error): 1359.72, MAE (Mean Absolute Error): 939.41

Model	Random Forest Regressor (100 Trees)
Validation RMSE	1359.72
Validation MAE	939.41
Forecast Month	July 2025
Stores Forecasted	1115
Total Forecast Sales	202,772,343.34
Min Forecast Sales	69,199.67
Max Forecast Sales	607,953.86
Average Forecast Sales	181,858.60

Interpretation:

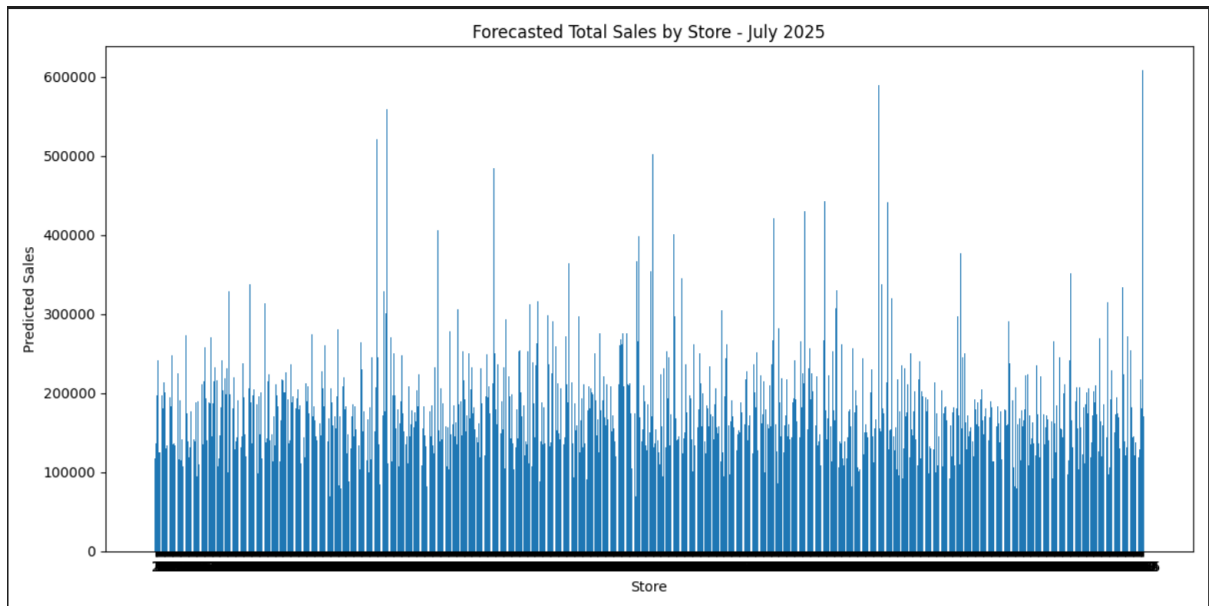
- The model performs reasonably well on unseen validation data.
- The relatively low MAE indicates that most daily store-level sales forecasts are within ± 940 units of actual sales.
- **Feature importance** (from Random Forest) shows that variables like Sales_Lag1, Sales_Lag7, Store, and DayOfWeek are the most influential in predicting sales.

Segmentation:

- It helps us identify where targeted strategies can be applied

Segment	Condition	Number of Stores
High Performers	Sales > Mean + Std Dev	131
Average Stores	Between (Mean \pm Std Dev)	875
Underperformers	Sales < Mean - Std Dev	109

Forecasted Sales by Store



Validation: Actual Forecast vs Predicted Forecast

