

Result Summary

Problem Statement:

Accurately predict hourly stock levels using sales and sensor data for smarter procurement.

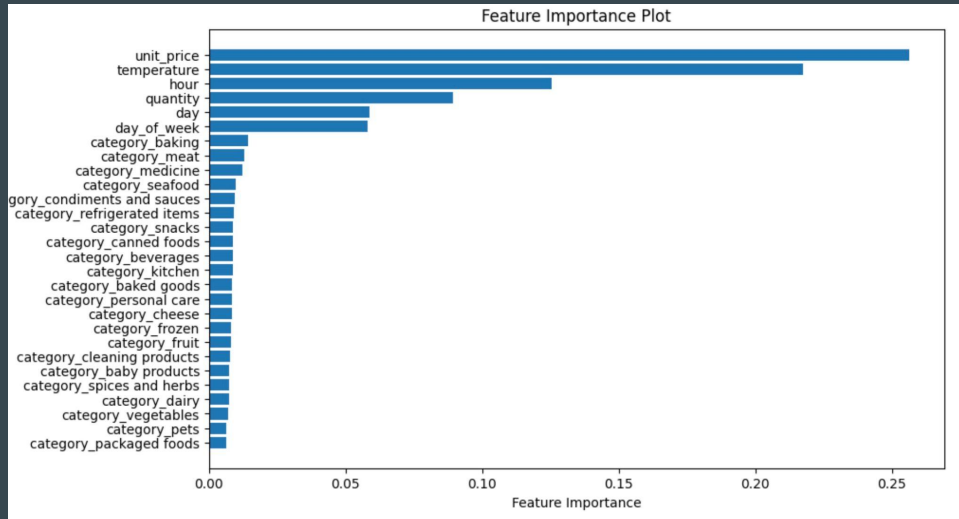


Solution Approach:

Developed a Random Forest Regression model for stock prediction.

Key Insights:

- Model predicts stock levels with a RMSE of 0.27.
- Temperature and unit price are crucial predictors.
- Time-based patterns (hour, day, day of week) are also important
- Product categories also influence predictions.



Business Benefits:

- Precise stock predictions aid smarter supplier procurement.
- Avoid overstocking or stockouts, minimizing financial impact.
- Automation enables timely adjustments to stock levels.

Next Steps:

- Implement model into stock management system.
- Continuously update model with fresh data for improved accuracy.