



# **Forecasting Product Demand at Wal-Mart**

# Agenda

01

**Business  
Problem**

02

**Data  
Understanding**

03

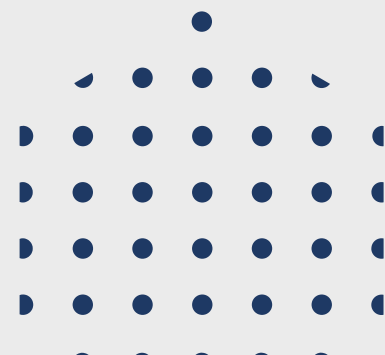
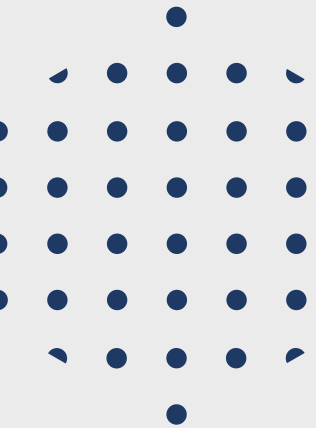
**Results and  
Recommendations**





# **BUSINESS PROBLEM**

- Predicting Demand
- Meeting Customer Needs
- Efficient Supply Chains

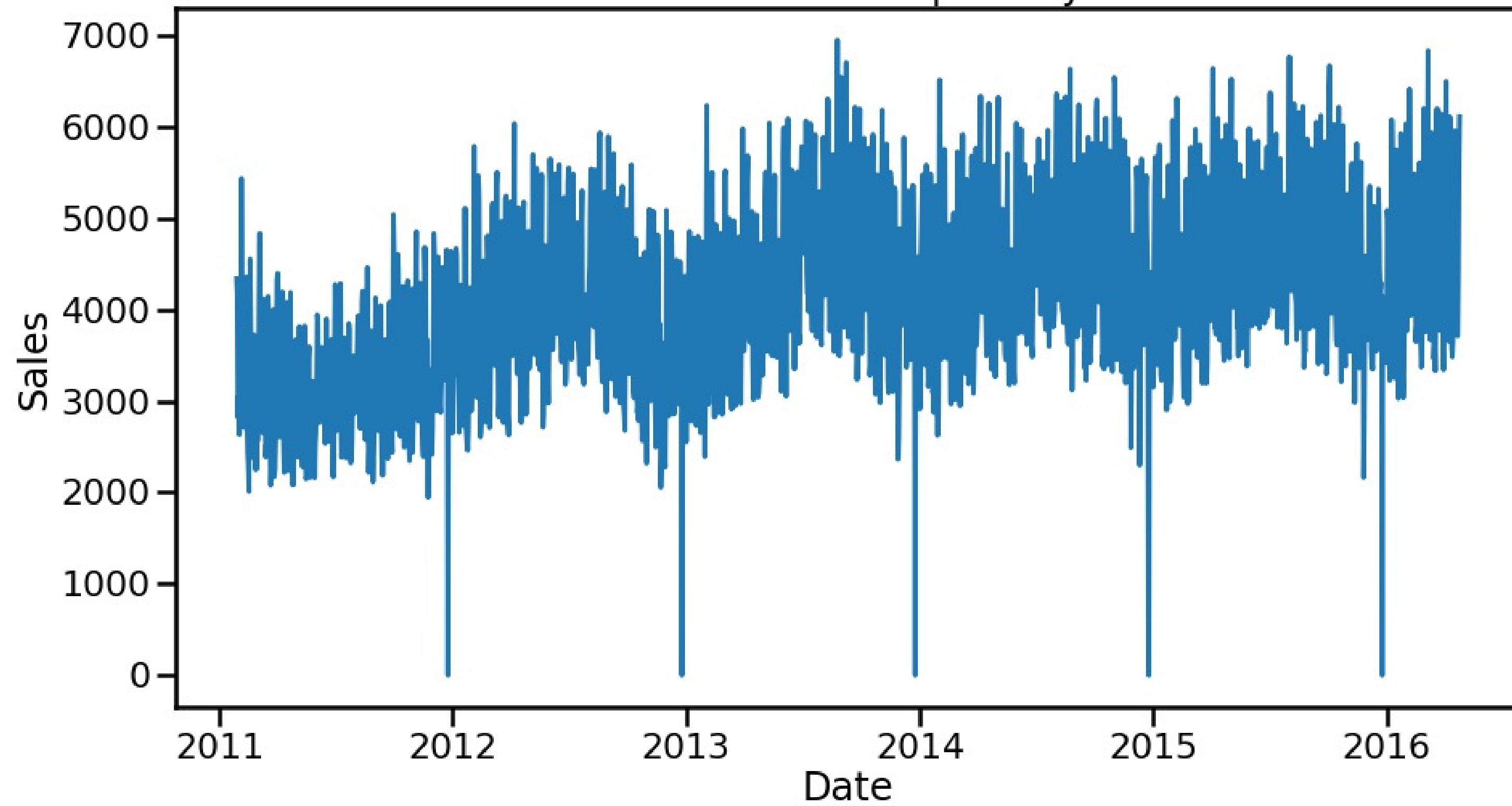


# Data Understanding

- M5 - Accuracy Competition
- Highly Noisy
- Several Zeroes

kaggle<sup>TM</sup>

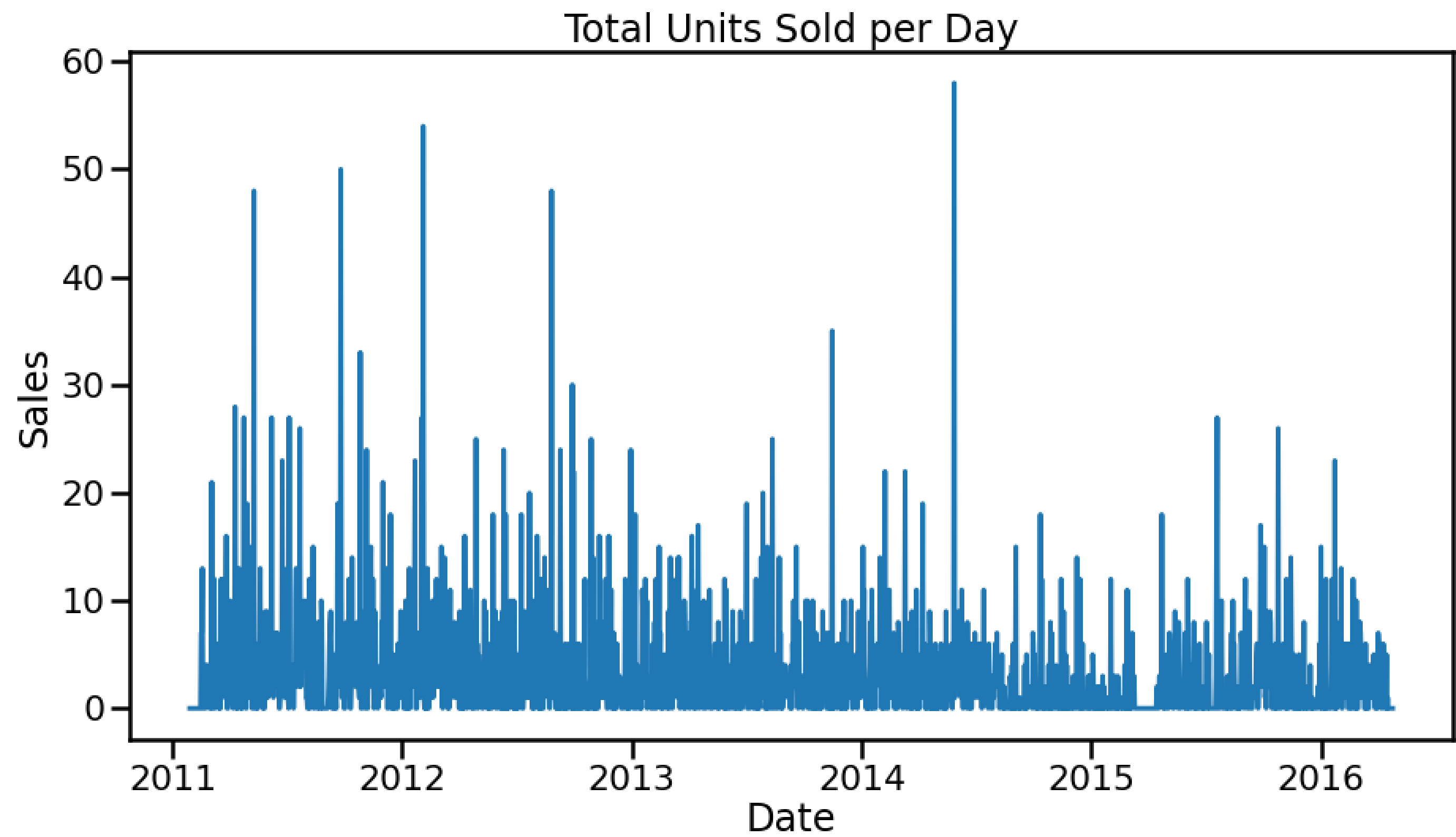
Total Items Sold per Day



# Data Understanding

- M5 - Accuracy Competition
- Highly Noisy
- Several Zeroes

kaggle<sup>TM</sup>



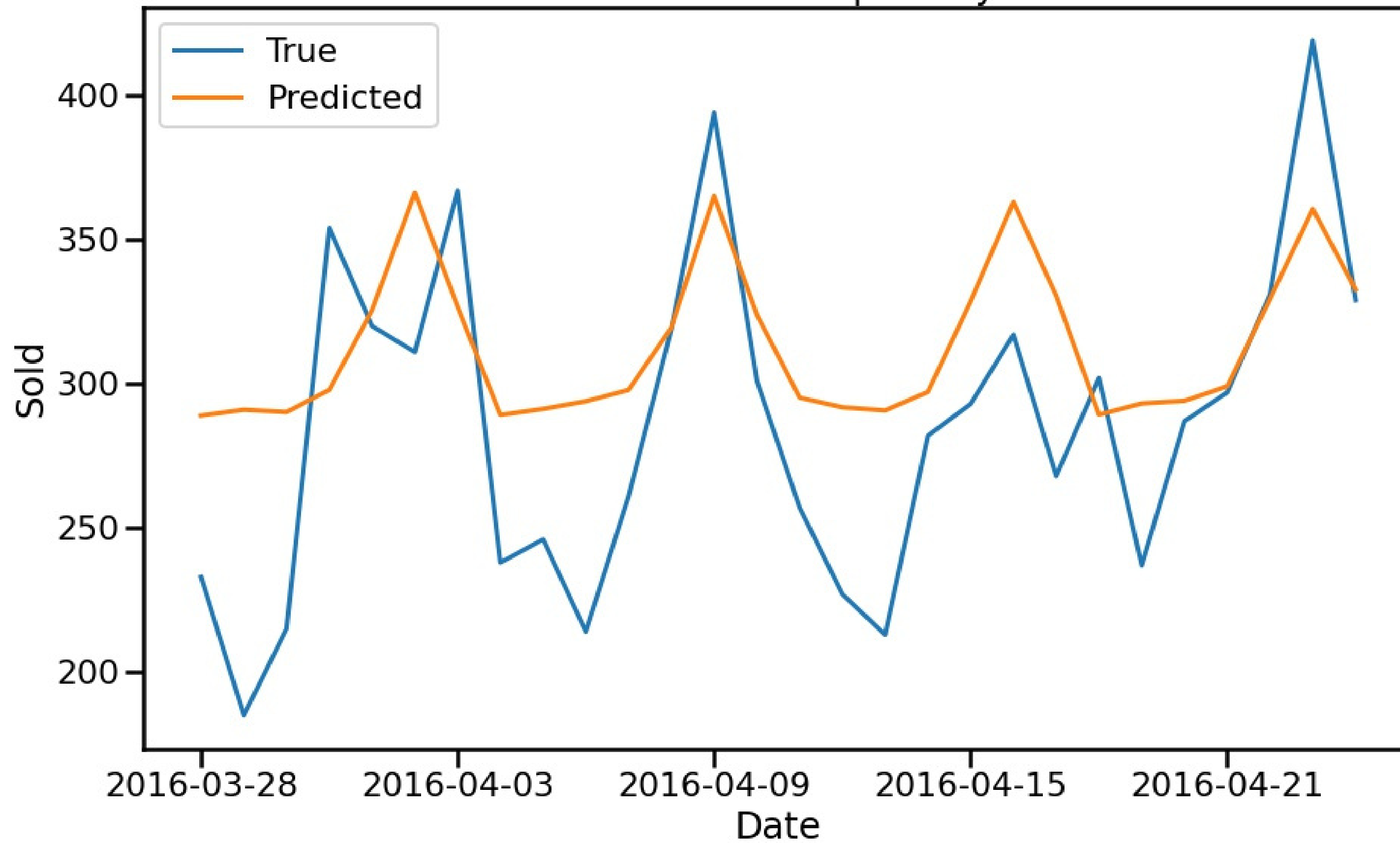
# Model Results

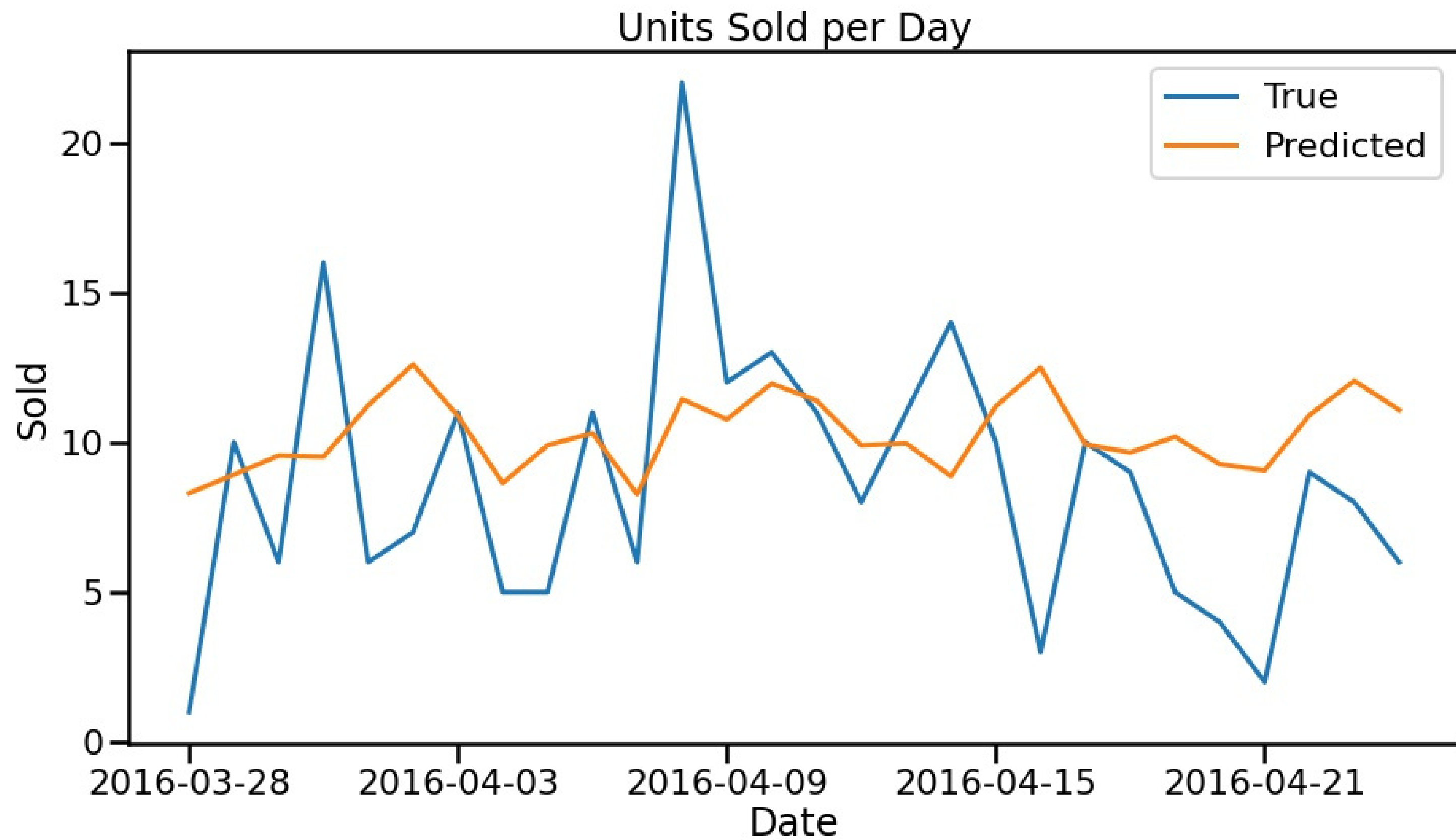
- Light Gradient Boost Machine
- Daily RMSE: 1.46 units





Total Units Sold per Day

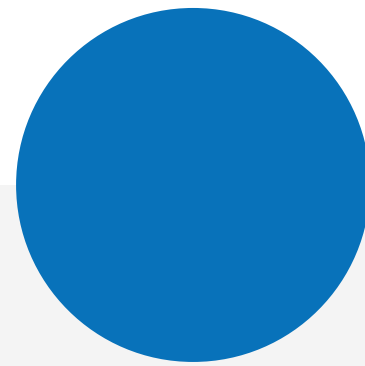




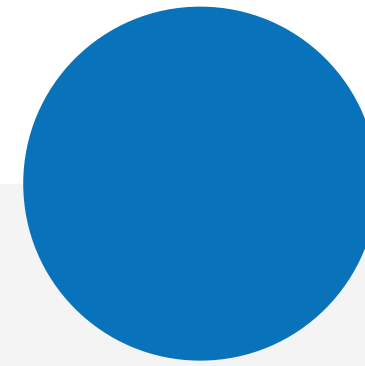
# Recommendations



Predict  
Demand



Detect  
Changes in  
Demand



Estimate  
Endcap  
Value

# Next Steps:

- N-BEATS
- Inventory
- Product Popularity
- Confidence Interval



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# THANK YOU

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CONTACT ME



[twood2015](#)



[t.wood20151996@gmail.com](mailto:t.wood20151996@gmail.com)



[Tyler Wood](#)

Source: [Supermarket Product Choices - Consumer Reports Magazine](#)

Source: [Strategies that Made Walmart Succeed \(profitworks.ca\)](#)