

MAXIMIZING SALES WITH ADVANCED FORECASTING

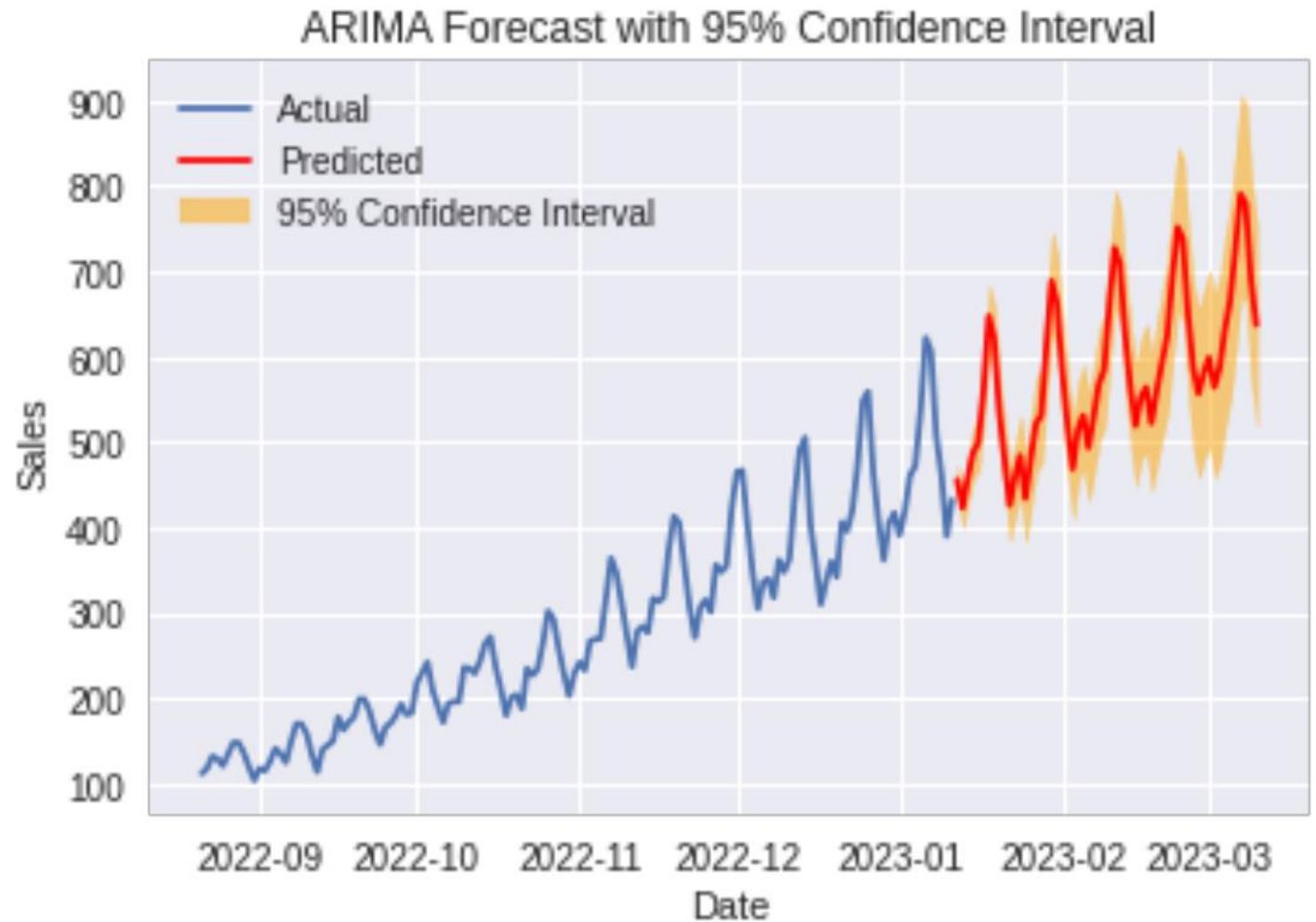
An overview of the Model

THE GOAL

- Forecasting future total sales of ABCD's items
 - Based on historical data
- Benefits of the Model
 - Inventory management
 - Production planning
 - Pricing, promotions and advertising
 - Overall: increased revenue, profitability and savings

MODEL SELECTION AND EVALUATION

- Multiple models tried
 - LSTM, Prophet and ARIMA developed the most
 - Exclusion based of Mean Absolute Error (MAE) and plotting
 - Feature engineering was done for the models
 - Rolling means and lagged sales
- ARIMA best
 - Grid Search for best parameters
 - Error (MAE)
 - Off by 21.93 on avg
 - Vs. 23.71 Prophet and 39.28 LSTM



FUTURE CONSIDERATIONS

- Deployment Suggestion
 - API endpoint
 - On Vertex AI (Google Cloud)
- Maintenance
 - Regular monitoring
 - Ensure continued performance
 - Alert system
 - When model's performance drops
 - Log
 - All requests and predictions