

Maverik's New Store Project by BonFire Analytics

Business Problem Statement

A retail convenience chain, Maverik, fuels adventures in more than 380 locations across 12 western states. Maverik is known for premium BonFire food, diesel and unleaded fuel, and in-store merchandise. The company is on an expansion spree and as part of its growth, it recently acquired "Kum & Go" nearly doubling its store count.

The company is planning to open 30 new stores yearly in a new market, and it needs to forecast daily sales for the new store. In this context, the company faces a crucial business challenge related to financial planning and return on investment (ROI) assessment for these new stores. The challenge lies in predicting the first-year sales for these newly acquired stores accurately. Maverik recognizes that accurate sales forecasts are essential for informed decision-making in terms of effective financial planning, staffing, inventory, and marketing as the company continues to grow.

We will be using historical data provided by Maverik to predict daily sales for upcoming new stores for the first year, considering, the seasonality and multiple sales metrics. This data includes daily sales, as well as information such as the stores' demographics, product mix, and sales by product category.

The goal is to develop a sales forecasting model that can accurately predict daily sales for the new store. We will be using a variety of forecasting methods, such as time series analysis, regression analysis, causal analysis, and machine learning. The model will be evaluated by comparing its prediction to actual sales data from a holdout dataset. The model performance will be evaluated using industry-standard metrics such as Forecast Accuracy Metrics (e.g., MAE, MAPE, RMSE) and its ability to update forecasts dynamically in response to new data. The company needs to forecast daily sales for the new store to make informed decisions about staffing, inventory, and marketing. This can help the company to maximize its profits and minimize its losses while maintaining customer satisfaction.

As noted, this project is focused on prediction of the future sales. Therefore, we will not be including any analysis of the customer demographics and operational analysis (e.g., Staffing and inventory management) which are considered out of scope for the current project.

Bhakti Dahal, Venkatachalam Kapuganti, Tarun Gulati, and Anjan Kumar will be leading this analytics project. We anticipate having results ready for review by Maverik on November 5, 2023. The final project deliverable will be on November 29, 2023.