Justin:

Project Goal: Maverik will be able to implement the model created in order to predict daily sales for diesel fuel, unleaded fuel, merchandise, and food sales for the entire first year of a store's operation. This model needs to surpass the accuracy metrics used by the current Maverik model in predicting these 4 product sales.

Business Problem: Maverik desires to know the daily sales for each of the 4 main products diesel fuel, unleaded fuel, merchandise, and food sales. Having these daily predictions allows for better planning for seasonality and setting realistic goals and expectations for what each new store can bring in revenue for the year.

Analytic Problem:

The target variables is specifically daily sales for the diesel, unleaded fuel, merchandise, and food services. Represented in the time_series_data_msba.csv sets of time series sales data where the variables

daily_yoy_ndt.total_inside_sales:	Inside sales, everything that isn't made at the store
daily_yoy_ndt.total_food_service:	Food service sales, everything that is made at the store
diesel:	Diesel gallons sold
unleaded:	all non-diesel gallons

The main level of accuracy that we will use to determine the performance of this model is RMSE and R Squared.

Predict the daily sales for each 4 products diesel, unleaded fuel, merchandise, and food service for each store for the following year based on the time series data.

Use a Prophet method to see the daily sales predictions for each of the 4 product categories for a new store.

Success Metrics:

Stake holders will judge how the success of this project by accurately predicting the sales of Diesel Gallons, Unleaded Gas, food service provided by the Maverick store, and non-food services product purchased in the store. The stakeholders will know that the project has been successful by having a model that has improved accuracy from the current model and being able to implement the model for future stores. This will be measured with the AUC measure of accuracy. This model must perform better than the accuracy already in place from the current model used within Maverick.

Scope:

We will be delivering a model that can be used to predict against a new store's location on their sales of the Diesel, Unleaded Gallons, Food Services, and non-food service merchandise in store. For each of these metrics it will produce a daily sales forecast, even considering seasonality.

The model should also be automated to push the most recent data into the model. Whether through cloud or API keys of data sets.

A project that could be added later is an easy User Interface implemented with the model within. Whether through app or web service, having this model combined with a simple user interface would allow easy implantation and understanding of the model across internal users.