True Value

The True Value Company is an American wholesaler based in Chicago, Illinois with over 4,500 independent retail locations worldwide. The company was originally founded as a hardware wholesaler, but now also supports several other retail identities, including home center stores, equipment and party rentals, commercial supplies, and nursery and garden center stores.

Project Description

True Value currently sets wholesale prices (price to their customers) using a rule-based framework that positions price within "acceptable bands" from its primary competitors. The project goal is to model demand for True Value's products over 2021 and 2022 and estimate demand elasticities with respect to certain variables within the model.

A rough outline of the project may look like:

- Exploratory Data Analysis: Capture correlative factors for True Value's demand, including, but not limited to, comprehensive order history data, competitor pricing, and industry trends
- Demand Modeling: Developing a model to predict the responsiveness of demand to pricing variables based on historic order activity and other related datasets
- Recommendations for future alterations to their pricing model based on simulated scenarios outlining expected demand response to proposed True Value initiatives to maximize profitability and growth

Internal Partners:

- **Ron Byczynski (Division Vice President, Infrastructure, DevOps and QA)**

Datasets:

1. Order History: data pertaining to True Value sales, before and after changing and rolling out initiatives that affect different variables in their demand model
2. Competitor Data: various referential attributes associated with competitors in the industry and their product/sales information
3. Industry Trends: HDAG will supplement any data provided by True Value with publicly available data on the economy and hardware industry that is expected to influence True Value's demand

Coding Languages: Python

Specific Skills

1. Data Analysis: Analyzing the provided dataset to come up with useful interpretations and outtakes. Communicating the limits and findings of any model(s) to the client

3. NLP and Model Creation: Creating a group of models using NLP and other Machine Learning methods to derive insights from the datasets.

Expected Technical Difficulty: **Intermediate/Advanced**