DAT 530 Advanced Statistical Methods

Project Review: Week X

Reviewer: Brandon Hosley

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Project Title:

Business Analytics Using Forecasting

Author(s):

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Source:

Galit Shmueli Student Projects

The Problem the Author(s) is Trying to Solve in the Project:

The authors seek to generate a model that will allow Nivea to forecast product supply and demand. Ultimately, the goal is to be able to engage changes in the supply-chain early enough to meet future fluctuations in consumer demand

Machine Learning (ML) Algorithm(s) used:

- Linear Regression
- Moving Average
- **ARIMA**
- Statistical Ensemble

A Brief Description of One of the ML Algorithms used:

Auto Regressive Integrated Moving Average (**ARIMA**) is a technique for making time series predictions. It provides a confidence interval for the next unit of time. The predictions are made using a moving average based on residuals and assumes that residuals will tend to a normal distribution.
ARIMA models can be generated with varies types of intervals and generally work better when other factors can distinguish different time epoch (for example: seasons in a year.)

Metrics Used to Evaluate the ML Algorithms:

Root Mean Squared Error (RMSE)