ALY 6080 Module 8 XN Project — Individual Draft Presentation

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Executive Summary

Inaccurate sales forecasting can lead to an undersupply or over supply of inventory due to the failure in foreseeing the peaks or troughs in client demand, both of which can lead to huge loss for the company.The initial analysis like data cleaning, reformatting, and exploratory analysis are carried out using R or Python.RMSE and MAPE scores of the model would be calculated and the model with the least RMSE and MAPE values would be chosen for forecasting.

Improving sales forecasting for the Danfoss customer is the goal of this project. After being presented with a business issue, research on the industry of the sponsor company was conducted. We had a meeting with the sponsor and obtained data on the dependent and independent variables. R was used for the preliminary analysis, which included data cleaning, reformatting, and exploratory analysis.

Business Problem

Sales forecasting is the practice of anticipating the volume of goods or services a sales unit will sell over the course of the upcoming week, month, quarter, or year. Inaccurate sales forecasting can lead to an undersupply or over supply of inventory due to the failure in foreseeing the peaks or troughs in client demand.Our sponsor has shared with us its marketing data, and we have to predict the future demand based on that. Our sponsor is a multi-national company and they generate tons of data at every moment. Using conventional multi-variable statistics approaches, the continuous data can be incorporated into the forecast.

during the COVID era, the corporation was unable to anticipate the sales projection with accuracy. The more precise the sales estimate, the better the company will be able to manage its inventory and avoid overstock and stock-out problems. Managers may estimate revenue and profit using data from accurate sales forecasting. The project's objective is to create a precise sales forecasting model for Danfoss.

Analytics / Visuals

The open-source programming language R is used for statistical computing or graphics. To find patterns and create useful models, analytics can be used. R programming was first thought to be challenging for non-statisticians to master. However, in recent years, the user interface has improved. Although R programming was initially developed for statisticians, it may also be used for other purposes such as predictive analytics, data modeling, and data mining.

Because it allows for the production of graphs and diagrams, R is also useful for data exploration and visualization. It allows for the creation of 3D charts and graphs as well as interactive displays. R can be used by businesses to build unique data collecting, grouping, and analytics models. It can be used to accelerate an organization's analytics program and address real-world business issues. There are innumerable R forums and tutorials available to help analysts learn the language, and there are more than two million active users (What Is R Analytics?, 2020).

Concise Flow

The project consist of four main part as listed below

1.   Research and understanding the dataset
2.   Cleaning the dataset
3.   Creating a machine learning algorithm to address the forecasting
4.   Generating reports

There might be some transition steps that they will be added later on

Analysis and synthesis of the data

Reviewers can watch their contribution to knowledge come to life in front of their eyes during data analysis and synthesis, which can be very fascinating. To make the analysis transparent and methodical, authors may need to restrain their zeal. There are numerous ways to guarantee accuracy and objectivity(Tod, 2019).

For this project we had calculated the exploratory analytics using R. These analytics will help us later in the project.

Recommendations & Findings

There hasn't been any significant finding yet. The list of Findings and recommendations will be added here later.

References

Tod, D. (2019, August 30). Data Analysis and Synthesis. ResearchGate; unknown.
https://www.researchgate.net/publication/335485475_Data_Analysis_and_Synthesis

What is R Analytics? (2020). TIBCO Software. https://www.tibco.com/reference-center/what-is-r-analytics