Capstone 3 Project Proposal

Hypothesis: For a U.S. retail store, forecast 36 weeks of sales data.

Context: Retail business need to forecast weekly sales to plan business operations such as determining the number of employees needed. Since retail stores have more than one department, weekly sales need to be forecasted on a department level.

Criteria for Success: Create a 36 weekly forecasts for a single store with simple exponential, double exponential, seasonal autoregressive moving average, and long short-term memory (LSTM) models.

Scope of Solution Space: Weekly sales data for 100 different departments across a U.S retailer's 45 stores.

Constraints within Solution Space: We only have three years' worth of weekly sales data. Not all of the stores have the same departments, and not all departments have the same number of observations.

Stakeholders to Provide Key Insights:

CEO

COO

CFO

Regional/Territory/District/Store managers

Sales Team

Department heads

Key Data Sources:

Sales and marketing departments

Key Data Sources:

https://www.kaggle.com/datasets/manjeetsingh/retaildataset?select=sales+data-set.csv