Project Details

The Business Problem

You recently started working for a company as a supply chain analyst that creates and sells video games. Many businesses have to be on point when it comes to ordering supplies to meet the demand of its customers. An overestimation of demand leads to bloated inventory and high costs. Underestimating demand means many valued customers won't get the products they want. Your manager has tasked you to forecast monthly sales data in order to synchronize supply with demand, aid in decision making that will help build a competitive infrastructure and measure company performance. You, the supply chain analyst, are assigned to help your manager run the numbers through a time series forecasting model.

You've been asked to provide a forecast for the next 4 months of sales and report your findings.

Steps to Success

Step 1: Investigate and Prepare the Data

Look at your data set and determine whether the data is appropriate to use time series models. Determine which records should be held for validation later on.

Step 2: Determine Trend, Seasonal and Error components

Graph the data set and decompose the time series into its three main components: trend, seasonality, and error.

Step 3: Build your Models

Determine the appropriate measurements to apply to your ARIMA and ETS models and describe the errors for both models.

Step 4: Forecast

Compare the in-sample error measurements to both models and compare error measurements for the holdout sample in your forecast. Choose the best fitting model and forecast the next four periods.

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