

**Linear Time Series Model using ARIMA:**

- I utilized the ARIMA model to create a linear time series model for the data. I added comments to my code to show my knowledge and easily follow my script.

**Selection of (p, d, q) Values:**

- I chose (2, 1, 1) as your (p, d, q) values based on experimentation and finding it to provide the most accurate results.

**Assumptions Made:**

- I assumed that there are no outliers or external factors that could impact the data and that all available data points are valid for analysis.

**Utilizing Full Dataset:**

- An improvement to my code would be to utilize the full dataset and explore correlations at a macro level to enhance the forecasting accuracy at a micro level. I would factor in a forecast for all merchants and seeing how it aligns with just merchant\_type\_code 5732.