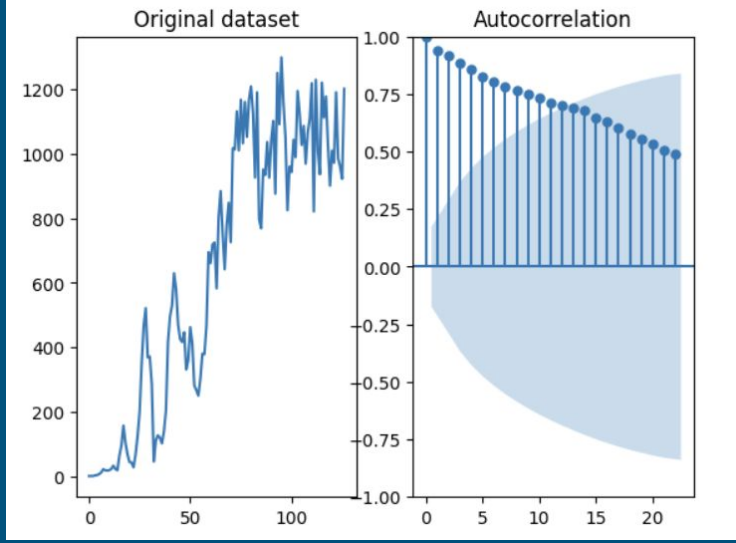
Aggregate ARIMA

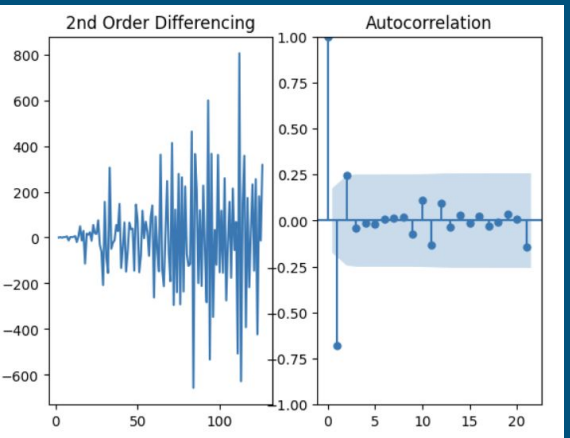
ARIMA

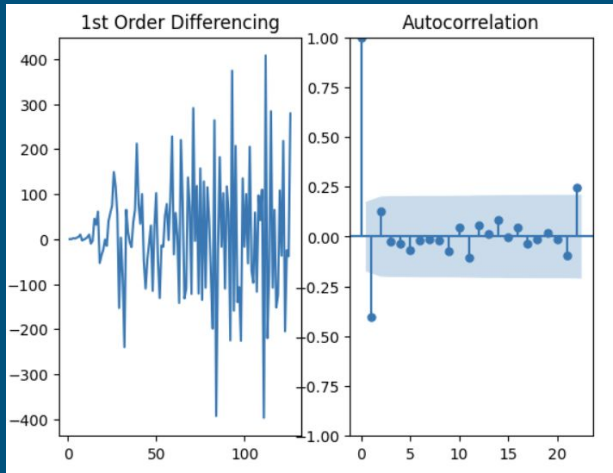
- Autoregressive Integrated Moving Average
- Predicts time series and without linear trends
- Stabilizing data before applying ARIMA
- p, d, q values, d is the difference between values in dataset.

Why ARIMA

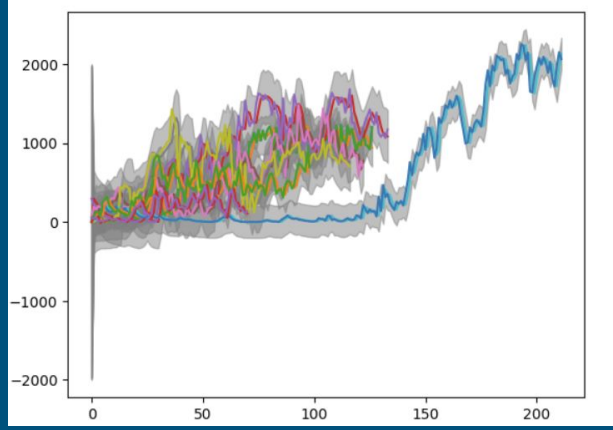
- It is perfectly tailored to the shipment dataset
- Ignores the general linear relation
- Accurately predicts volatile data







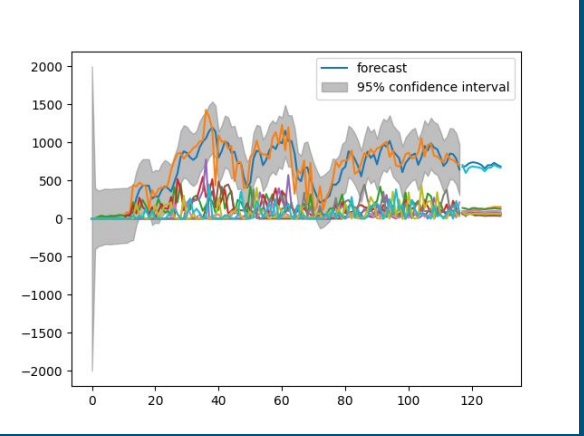
Our implementation

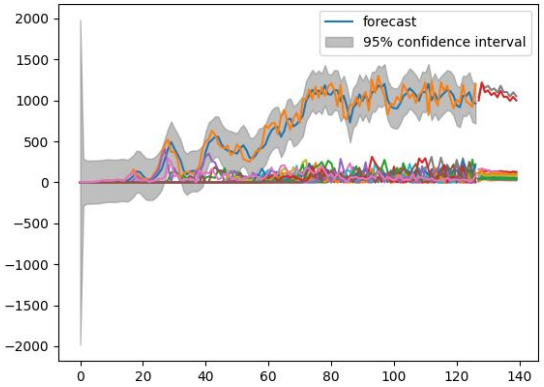


- Individually predict trends in each product number
- Find ratio between item and total number of items and item group
- Aggregate results in product numbers and their weights
- Run ARIMA again
- Desired unit = Regression of each ratio * regression of product category
- Result -> fun!

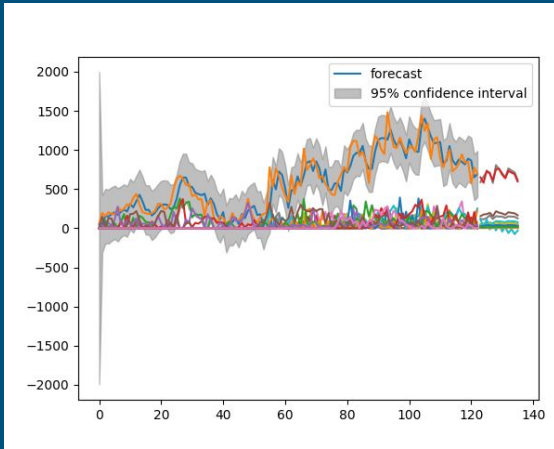
Interpreting Outputs

- The 2 curves represent given data, and our prediction
- The trend after is our “inventory forecast”





BUT!!!



Our GUI

- Intuitive
- Beautiful
- Informative
- Sleek