JOB AUTOMATION

GUILLERMO GAMEZ

OPERATIONS SPECIALIST - OEP/ACOSTA

What is Acosta ?

>   Marketing Agency for Food Packaged goods dedicated to gain market share

What is OEP ?

>   Sub Branch of Acosta dedicated to Amazon Business Only
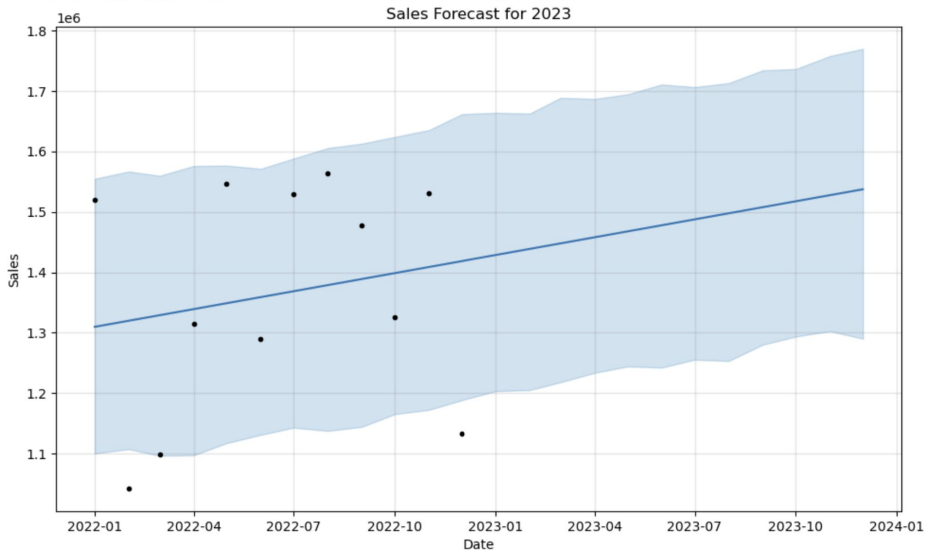
Operation Specialist Duties

>   Forecasting Sales

>   Forecasting Unit Demand

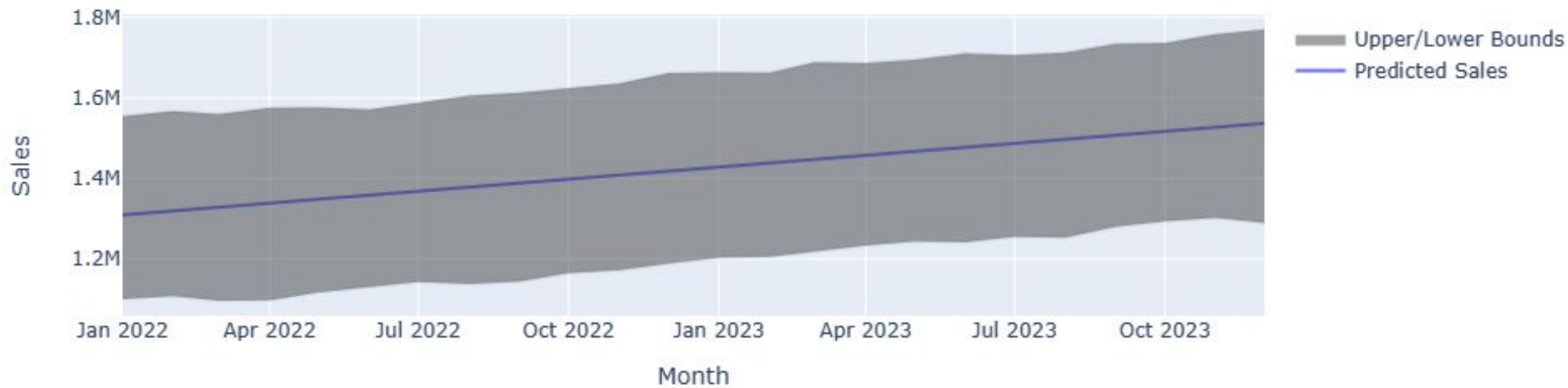>   Inventory Control

>   Route Shipments

>   Edit/Create Documents

Sales Forecast Using Prophet

Sales Forecast for 2023

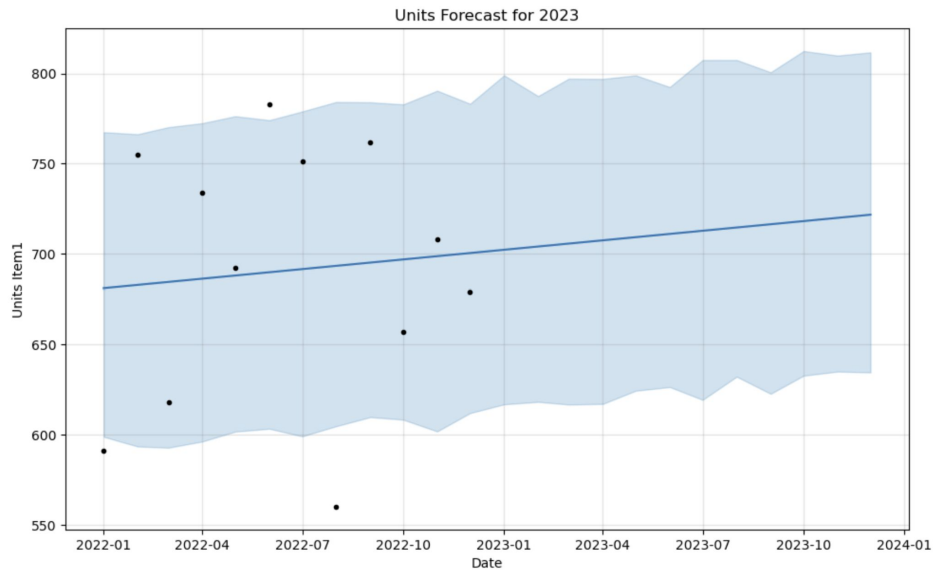| Date	Lower Bound	Predicted Sales	Upper Bound
2023-01-01	1,203,238.26	1,428,554.58	1,663,937.19
2023-02-01	1,204,963.95	1,438,650.96	1,662,678.90
2023-03-01	1,217,986.57	1,447,770.27	1,688,688.64
2023-04-01	1,233,491.61	1,457,866.64	1,686,861.38
2023-05-01	1,244,062.28	1,467,637.33	1,694,553.15
2023-06-01	1,242,212.40	1,477,733.71	1,710,730.54
2023-07-01	1,255,321.53	1,487,504.39	1,706,541.35
2023-08-01	1,253,173.42	1,497,600.77	1,713,114.01
2023-09-01	1,280,129.12	1,507,697.15	1,734,271.13
2023-10-01	1,293,610.04	1,517,467.83	1,736,337.82
2023-11-01	1,302,548.24	1,527,564.21	1,757,872.76
2023-12-01	1,290,014.94	1,537,334.90	1,769,792.55

Sales Forecast Using Prophet

Predicted Sales for 2023

Unit Forecasting Using Prophet Item 1

Units Forecast for 2023

	Lower Bound	Predicted Sales	Upper Bound
Date			
2023-01-01	616.74	702.21	798.94
2023-02-01	618.10	704.02	787.44
2023-03-01	616.61	705.65	797.12
2023-04-01	616.97	707.45	796.97
2023-05-01	624.27	709.20	798.94
2023-06-01	626.33	711.01	792.47
2023-07-01	619.20	712.75	807.45
2023-08-01	632.06	714.56	807.46
2023-09-01	622.56	716.36	800.67
2023-10-01	632.61	718.11	812.43
2023-11-01	634.90	719.92	809.93
2023-12-01	634.43	721.66	811.70

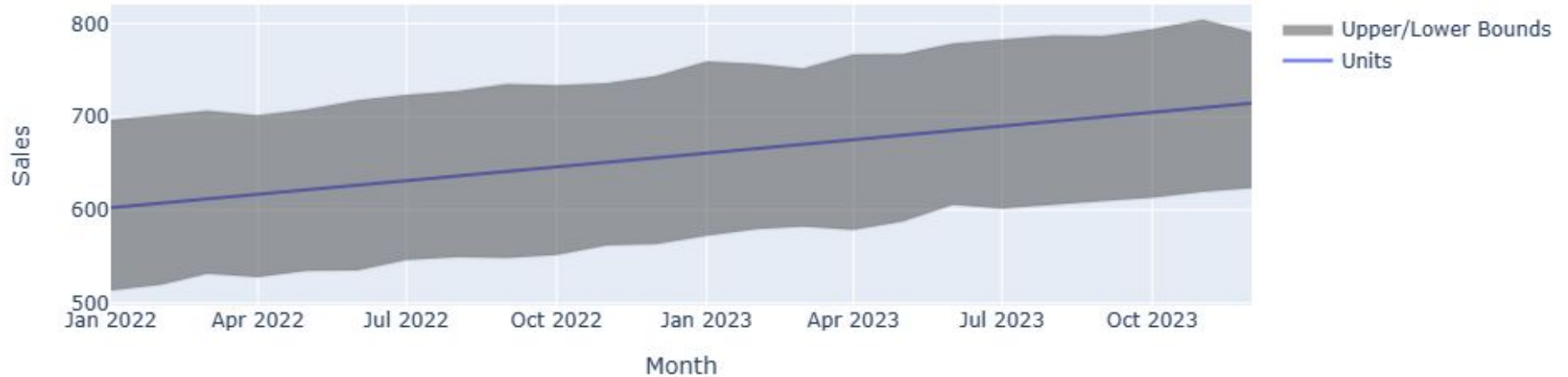# Unit Forecasting Using Prophet Item 1

Predicted Units "item1" for 2023

Unit Forecasting Using Prophet Item 2

Predicted Units "item2" for 2023

Multi Prophet Forecasting - Failed

	month	item1	item2	item3
0	2022-01-01	591	740	647
1	2022-02-01	755	532	569
2	2022-03-01	618	678	508
3	2022-04-01	734	509	518
4	2022-05-01	692	573	645

	ds	y	y1	y2
0	2022-01-01	591	740	647
1	2022-02-01	755	532	569
2	2022-03-01	618	678	508
3	2022-04-01	734	509	518
4	2022-05-01	692	573	645

```python
from multi_prophet import MultiProphet

model = multi_prophet.MultiProphet(columns=['y','y1','y2'])

model.fit(multiple_df)

future_df = model.make_future_dataframe(periods=12, freq='MS')

forecast = model.predict(future_df)
```

```
-------------------------------------------------------------------
ModuleNotFoundError                     Traceback (most recent call last)
~\AppData\Local\Temp\ipykernel_11680\3258052341.py in <module>
----> 1 from multi_prophet import MultiProphet
      2
      3 model = multi_prophet.MultiProphet(columns=['y','y1','y2'])
      4
      5 model.fit(multiple_df)

ModuleNotFoundError: No module named 'multi_prophet'
```

Next Steps

Complete the Multi-Prophet forecasting

Include holiday effect in projections

Combine item forecasting into 1 data frame

Create automated shipping replenishment

Create "Title audits"

Show this to my boss to get a promotion

Create a "backtesting" strategy

Questions?