

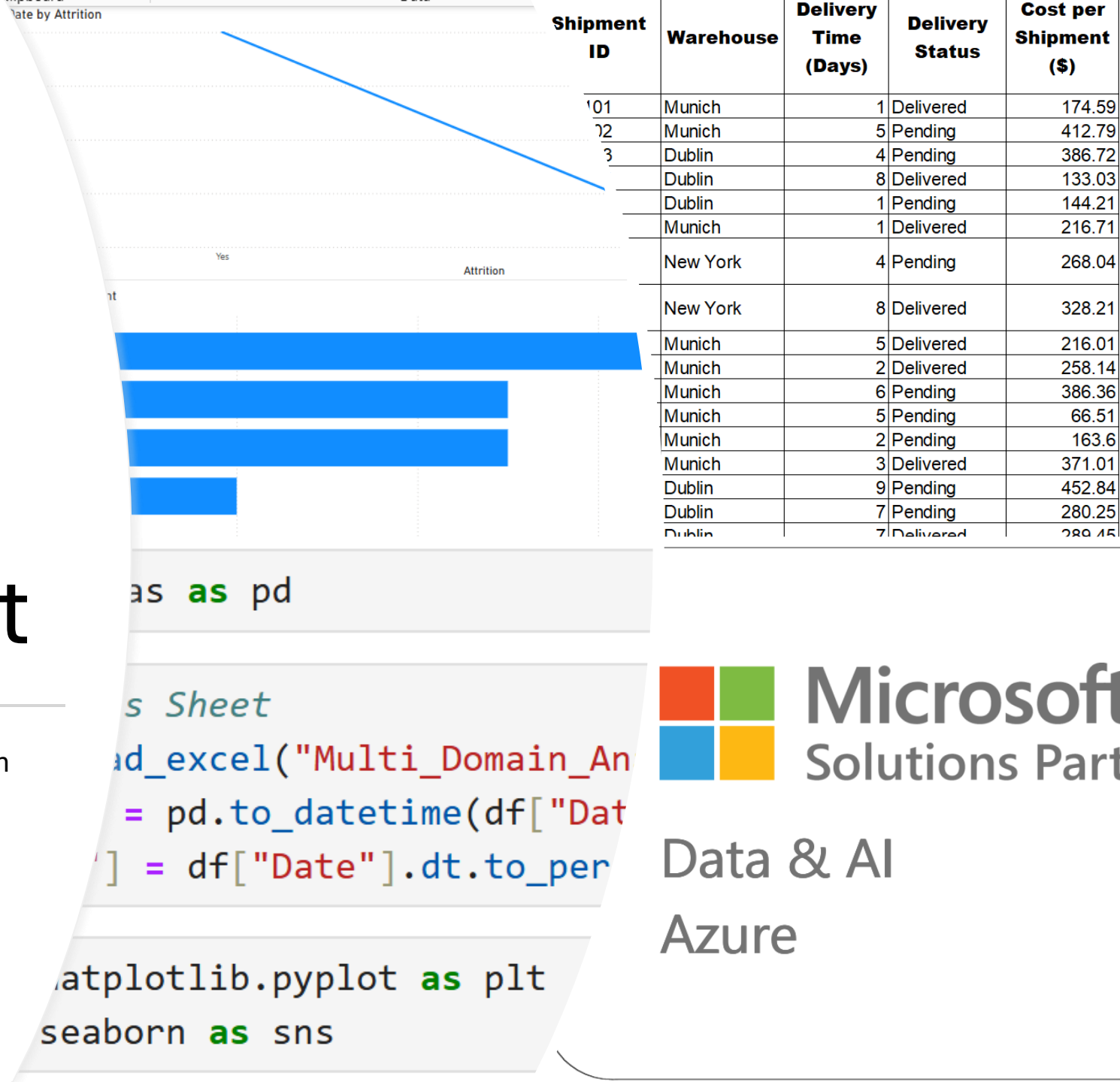
Driving Business Insights Through Data For Microsoft

A Cross-Functional Analytics Project Using Excel, Python & Power BI

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Open to Sponsorship: us USA | IE Ireland | DE Germany



Data & AI
Azure

Unlocking Opportunities Through Data

- Business teams often lack visibility into performance
- Data lives in silos: Sales, HR, Marketing, Logistics
- This project brings it all together to empower decision-makers



Microsoft GraphAPI



1002	2019-06-30 00:00:00	Engineering	Yes		4
1003	2019-12-27 00:00:00	HR	No		5
1004	2020-06-24 00:00:00	Engineering	Yes		4
1005	2020-12-21 00:00:00	Engineering	Yes		2
1006	2021-06-19 00:00:00	Marketing	No		2
1007	2021-12-16 00:00:00	Marketing	Yes		5
1008	2022-06-14 00:00:00	Engineering	Yes		4
1009	2022-12-11 00:00:00	Sales	Yes		1
1010	2023-06-09 00:00:00	Marketing	No		5
1011	2023-12-06 00:00:00	HR	No		2
1012	2024-06-03 00:00:00	Marketing	No		2
1013	2024-11-30 00:00:00	Marketing	Yes		5
1014	2025-05-29 00:00:00	HR	Yes		4
1015	2025-11-25 00:00:00	Engineering	No		2
1016	2026-05-24 00:00:00	HR	Yes		4
1017	2026-11-20 00:00:00	Engineering	Yes		2
1018	2027-05-19 00:00:00	Engineering	No		2




CAMP1	TV	162	10.68	5703.45
CAMP2	Email	316	8.48	9030.09
CAMP3	Email	953	11.5	5332.77
CAMP4	TV	926	13.78	12472.48
CAMP5	Radio	894	9.19	12143.16
CAMP6	Email	788	11.17	17470.57
CAMP7	Social Media	560	11.6	9616.66
CAMP8	Email	709	6.29	17245.79
CAMP9	Social Media	204	4.38	19519.61
CAMP10	Radio	198	3.87	6326.12
CAMP11	TV	610	4.52	16877.27

SHIP101	Munich	1	Delivered	174.00
SHIP102	Munich	5	Pending	412.79
SHIP103	Dublin	4	Pending	386.72
SHIP104	Dublin	8	Delivered	133.03
SHIP105	Dublin	1	Pending	144.21
SHIP106	Munich	1	Delivered	216.71
SHIP107	New York	4	Pending	268.04
SHIP108	New York	8	Delivered	328.21
SHIP109	Munich	5	Delivered	216.01
SHIP110	Munich	2	Delivered	258.14
SHIP111	Munich	6	Pending	386.36
SHIP112	Munich	5	Pending	66.51
SHIP113	Munich	2	Pending	163.6

2003	India	19	519.7	5
2004	USA	9	104.68	5
2005	USA	7	572.05	4
2006	India	4	469.45	3
2007	India	18	893.32	3
2008	India	13	383.37	4
2009	India	11	161.21	9
2010	Germany	4	185.84	2
2011	Ireland	4	773.44	9
2012	USA	10	637.31	1
2013	India	5	146.07	1
2014	India	9	129.9	5
2015	India	3	715.92	6

2025-01-15 00:00:00	Monitor	Ireland	5	Distributor	300	1500
2025-03-13 00:00:00	Monitor	Germany	27	Online	300	8100
2025-03-02 00:00:00	Monitor	USA	23	Distributor	300	6900
2025-01-21 00:00:00	Headphones	USA	9	Online	75	675
2025-03-24 00:00:00	Mouse	USA	9	Online	25	225
2025-03-28 00:00:00	Headphones	South India	3	Distributor	75	225
2025-03-16 00:00:00	Headphones	USA	19	Online	75	1425
2025-03-16 00:00:00	Mouse	Germany	16	Distributor	25	400
2025-03-29 00:00:00	Mouse	USA	16	Retail	25	400
2025-04-10 00:00:00	Mouse	Ireland	3	Online	25	75
2025-01-24 00:00:00	Mouse	Ireland	20	Retail	25	500
2025-01-03 00:00:00	Monitor	South India	24	Distributor	300	7200

End-to-End Azure engineering project

End-to-End Data Pipeline Overview

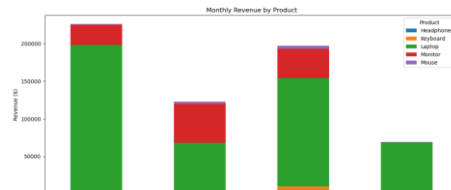
- Excel → Python → Power BI → Insights → Actions
- Unified 5 business datasets
- Built dashboards for sales, customers, HR, marketing, and logistics
- Created forecasts, segmentations, and automated insights

Business Highlights from the Data

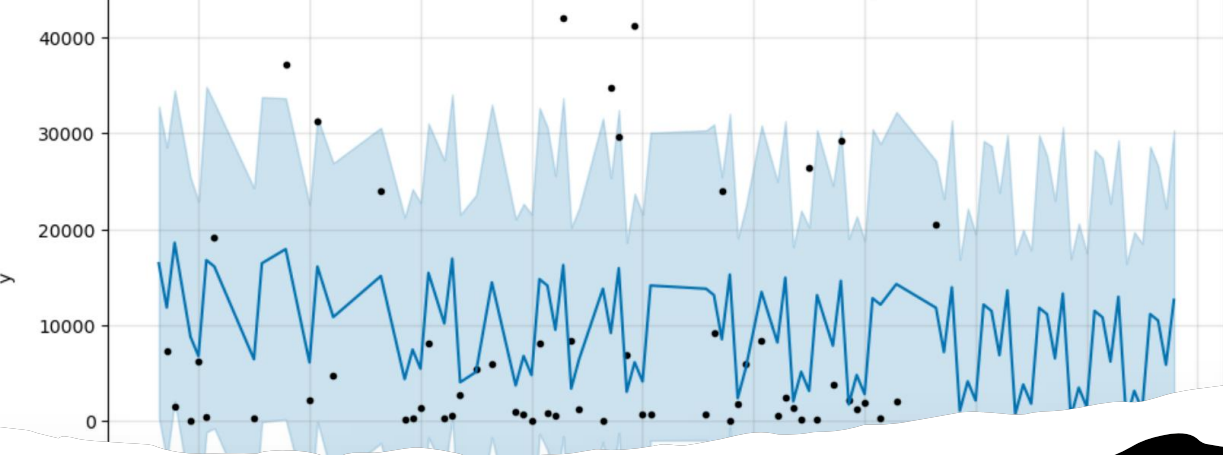
```
import matplotlib.pyplot as plt
import seaborn as sns

# Monthly revenue by product
monthly_rev = df.groupby(["Month", "Product"])["Revenue"].sum().unstack().fillna(0)

# Plot
monthly_rev.plot(kind="bar", stacked=True, figsize=(12,6))
plt.title("Monthly Revenue by Product")
plt.xlabel("Month")
plt.ylabel("Revenue ($)")
plt.xticks(rotation=45)
plt.tight_layout()
plt.show()
```



- 💰 Laptops drove the highest revenue across all regions
- 📉 Headphones showed a month-on-month revenue decline
- 🧠 High attrition in Sales — needs attention
- 📦 Longest delivery times in Dublin warehouse



```
sales_forecast = df.groupby("Date")["Revenue"].sum().reset_index()  
sales_forecast.columns = ["ds", "y"]
```

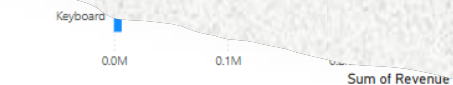
```
[11]: model = Prophet()  
model.fit(sales_forecast)
```

```
09:27:00 - cmdstanpy - INFO - Chain [1] start processing  
09:27:02 - cmdstanpy - INFO - Chain [1] done processing
```

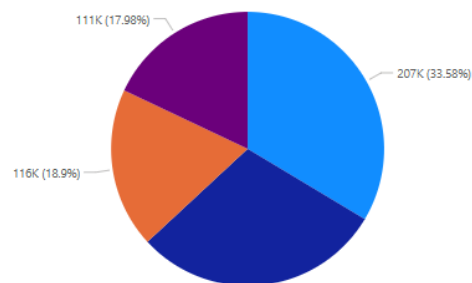
```
[11]: <prophet.forecaster.Prophet at 0x1938a696a50>
```

```
[12]: future = model.make_future_dataframe(periods=30)  
forecast = model.predict(future)
```

Sales & Forecasting Dashboard



Revenue by Region



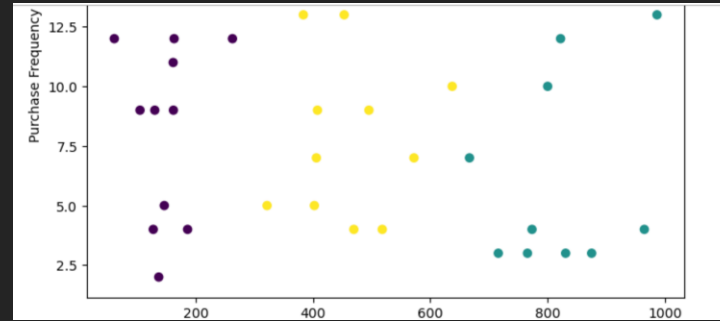
Revenue by Time

Region
● Germany
● South India
● USA
● Ireland



PROPHET





Customer Segmentation

- We grouped customers by how often and how much they buy — and discovered 3 clear patterns. This helps in targeting the right offers.

Recommendations

Insights	Action Recommendation
Germany has highest product demand	Increase ad spent in that region
HR Attrition Rising	Introduce Retention Incentives
Costly Campaigns With Low ROI	Pause or A/B Test Alternatives

What's Next?

- Connect CRM, live sales data
- Automate reporting
- Build a real-time dashboards for leadership teams



Open To Opportunities

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- Portfolio: <https://github.com/Aay6827/Aayush-Data>

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