Challenging ENIAC'S Discount Strategy

A data analysis with pandas and seaborn

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Should ENIAC offer discounts?

Marketing Lead states that discounts drive up <u>company growth</u>
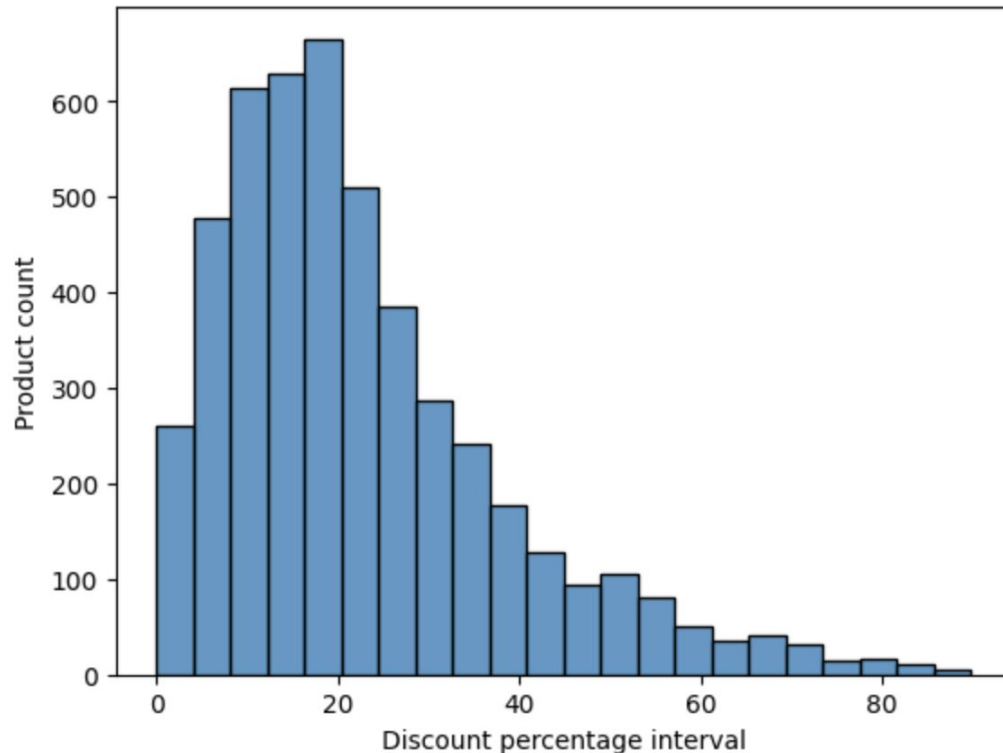
versus

Investors worry that excessive discounting weakens ENIAC's <u>premium brand</u>

The Analytics team conducted an in depth analysis of orders, orderlines & products

Key Questions:

→ Have discounts been beneficial for our company?

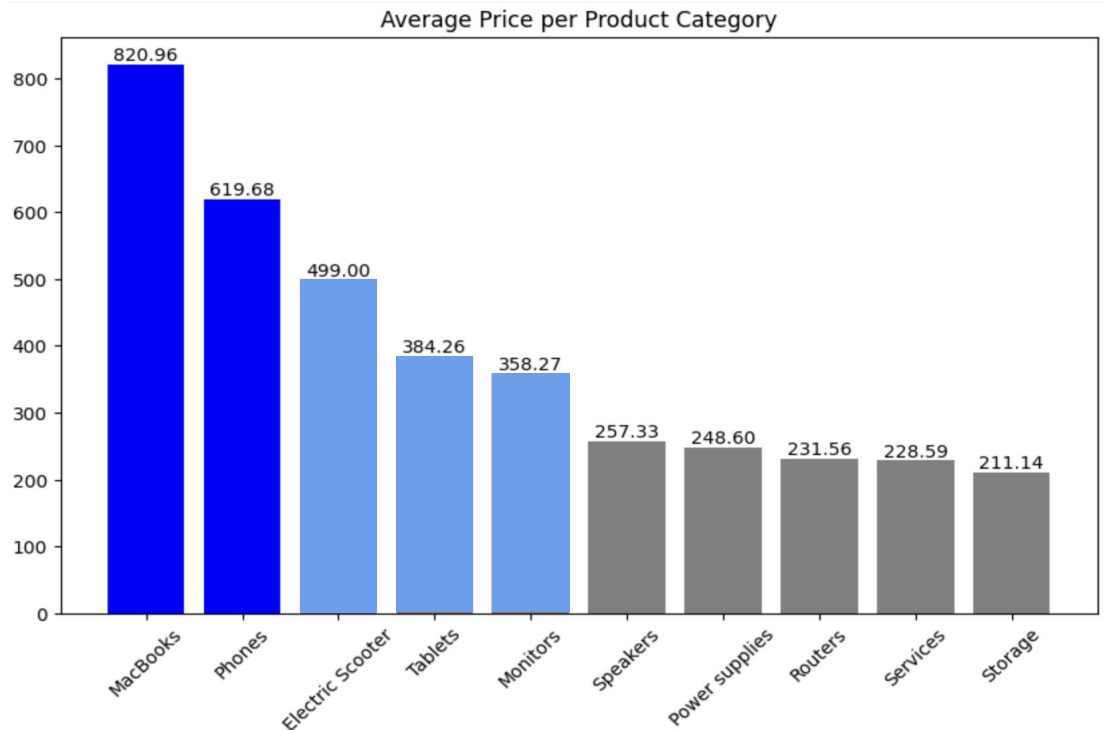→ What should ENIAC's discount strategy look like?

Discount distribution in our product line

- The majority of discounts are **small** (0-20 %) to **moderate** (20-40%)

- **Rare high discounts**, signaling the **price power** of ENIAC

How are ENIAC's **products classified** (Top 10)

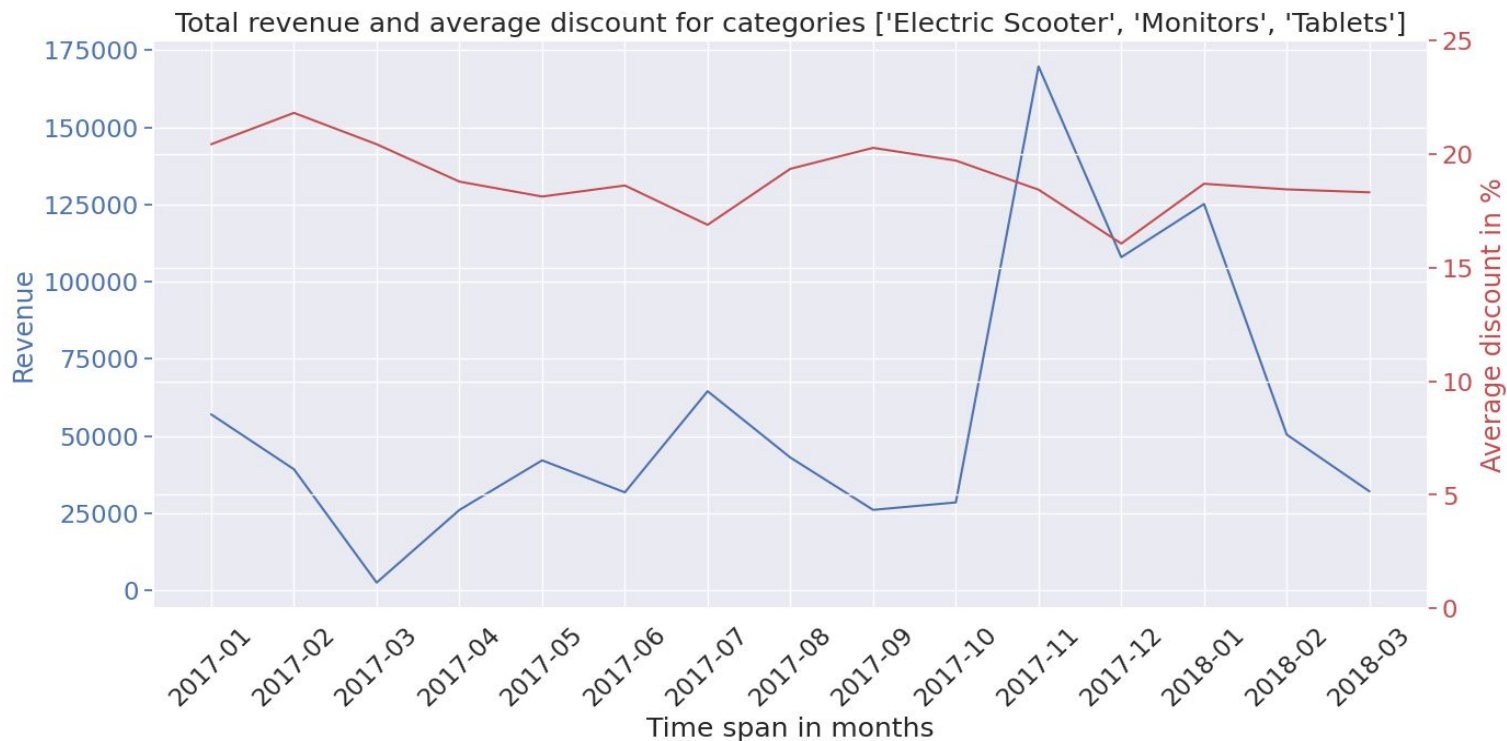Average Price per Product Category

- **High-priced** products contribute significantly to **revenue** and **profit**

- **Mid-priced** products are important for **volume sales**

- **Low-priced** products are **high volume** & **low margin** items

# **Total revenue vs. avg. discount (high-priced)**

Total revenue and average discount for categories ['MacBooks', 'Phones']
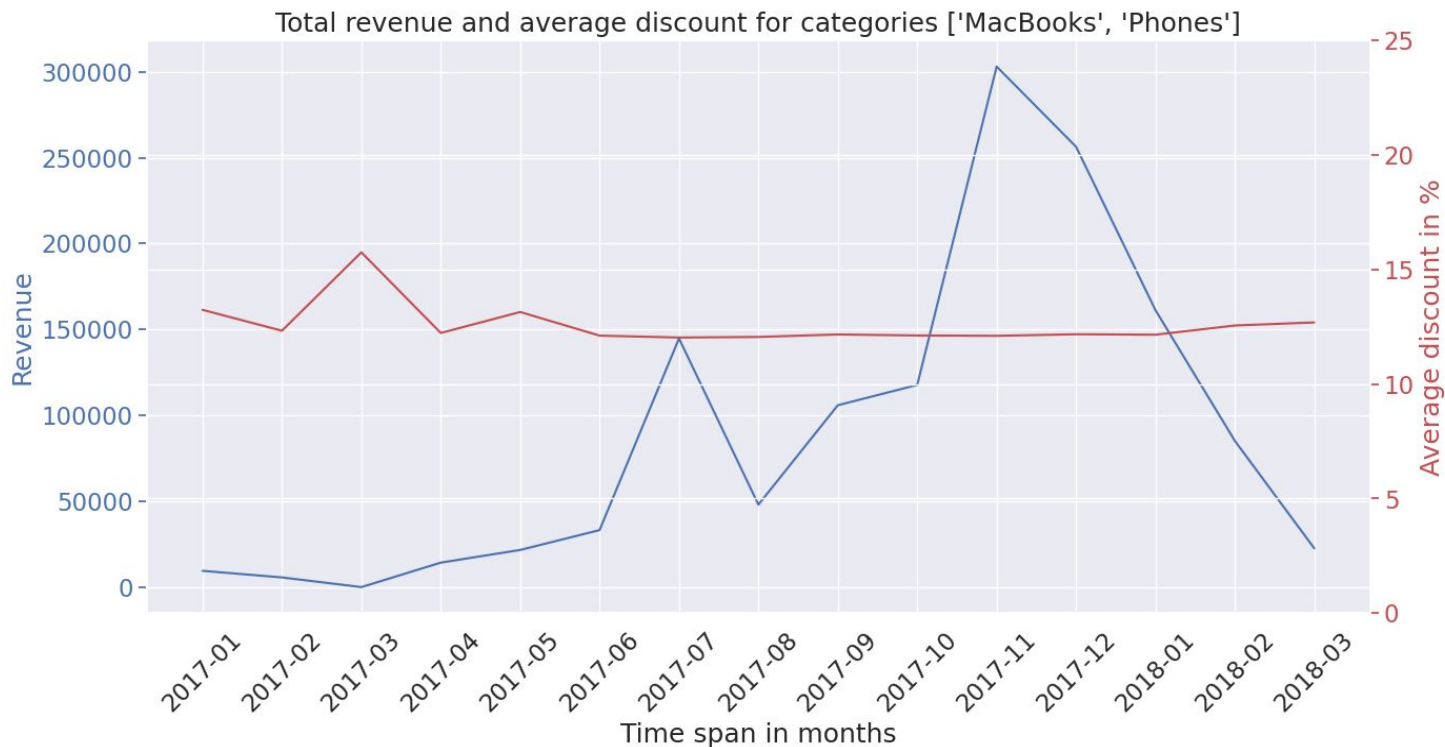
Total revenue vs. avg. discount (mid-priced)

Total revenue and average discount for categories ['Electric Scooter', 'Monitors', 'Tablets']

Total revenue vs. **avg. discount** (low-priced)

Total revenue and average discount for categories ['Speakers', 'Power supplies', 'Routers', 'Services', 'Storage']
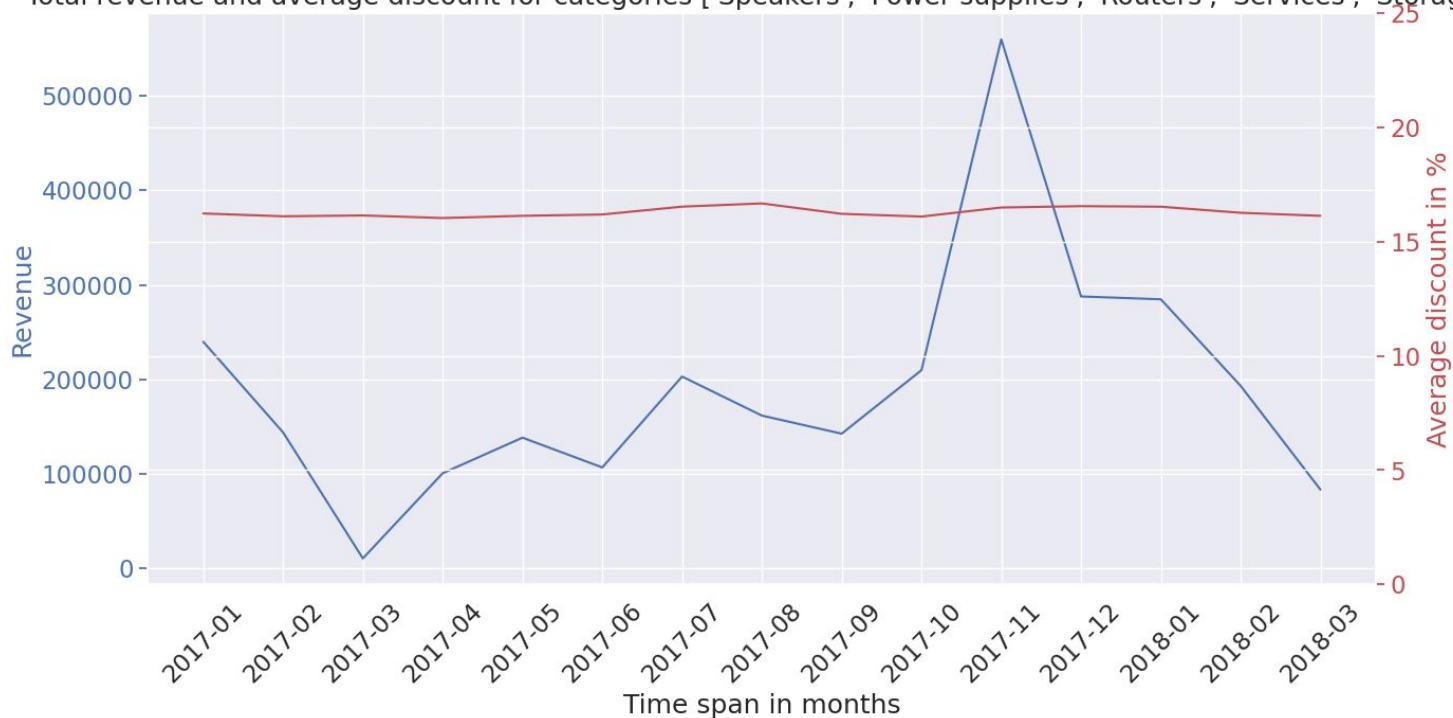
Should we continue discounting?

Conclusion:

"It seems that discounting does not have a major impact on revenue."

Recommendations on strategic discounting

- **Overall pricing strategy** needs to depend on the **price** and **revenue** of the **product class** (high-, mid-, low-priced products)

- **Off-season strategy**
  - In weaker months, introduce discounts or special offers to attract customers on low and mid-priced products.

- **Event-based pricing**
  - During major events (Black Friday, Cyber Monday, Christmas), offer special prices for a limited time on all price classes.

Data collection improvements

Customer data

- Track **customer lifetime value** for discounted vs. full-price buyers

- Monitor **customer return rates** post-discount purchases
  → Do customers return for full-price purchases?

Product data

- Track **profit margins per product** before and after discounts

Competitor & market data

- Benchmark **competitor pricing and discount strategies** for effective market positioning
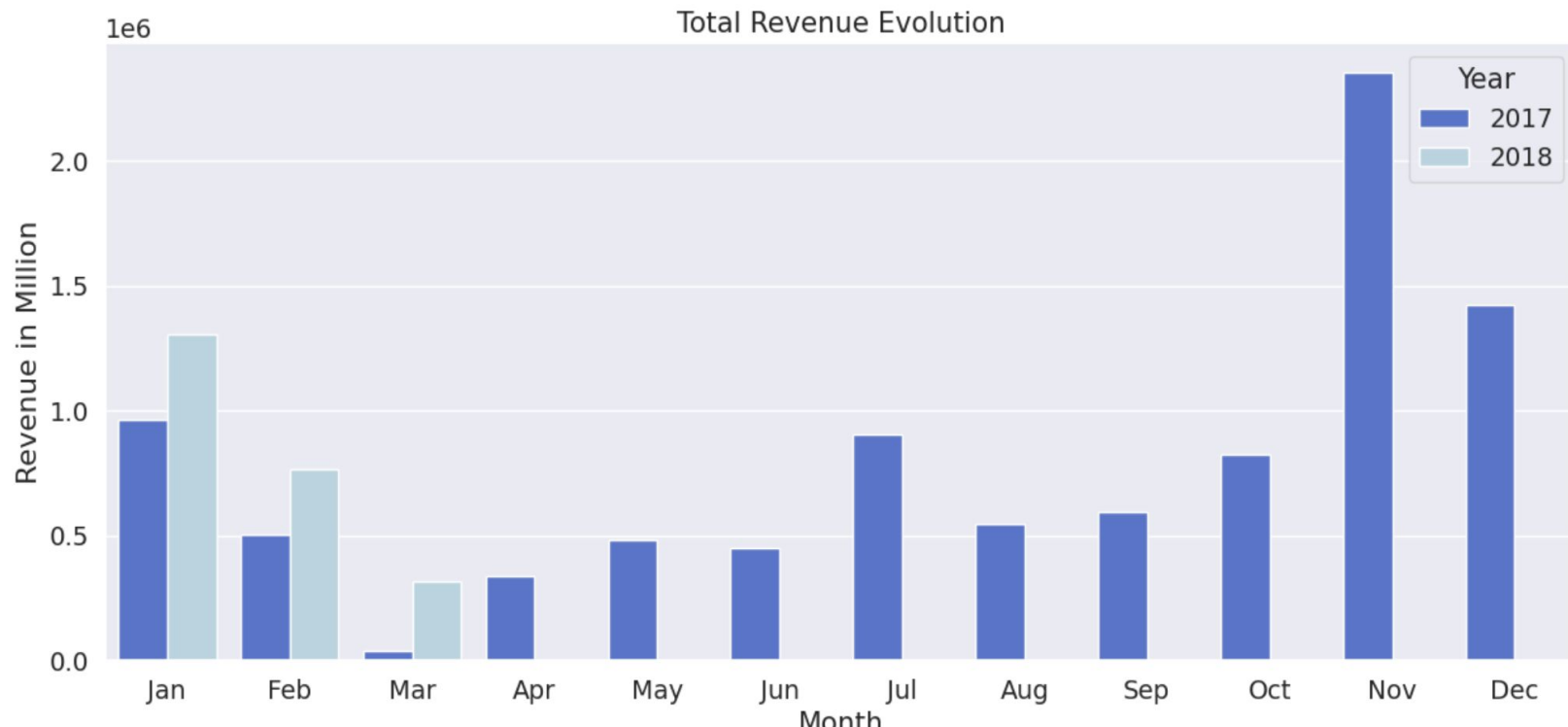
Thank you for your attention!

Any questions?

Appendix
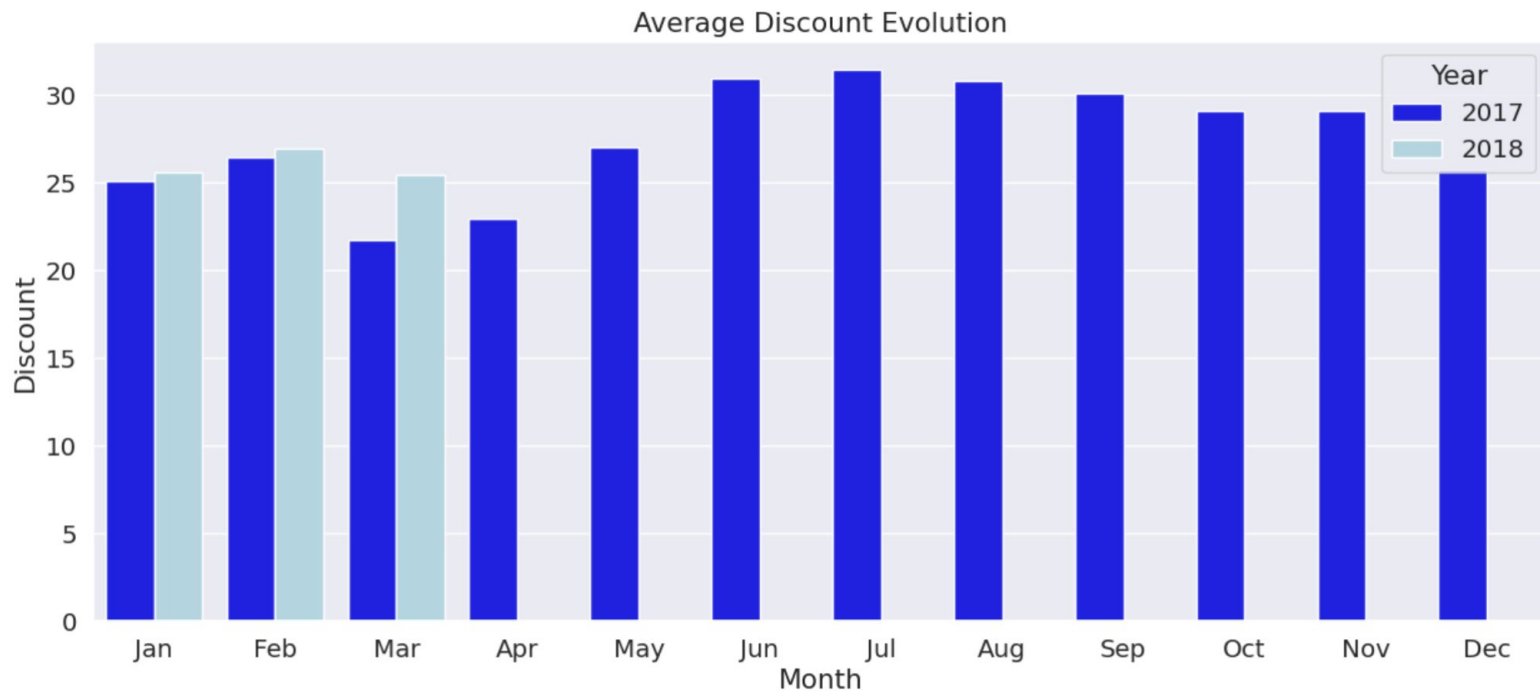
Yearly Revenue Breakdown by Month

Total Revenue Evolution

Yearly Trend of Average Discount by Month

Average Discount Evolution

Yearly Order Status Breakdown for Q1

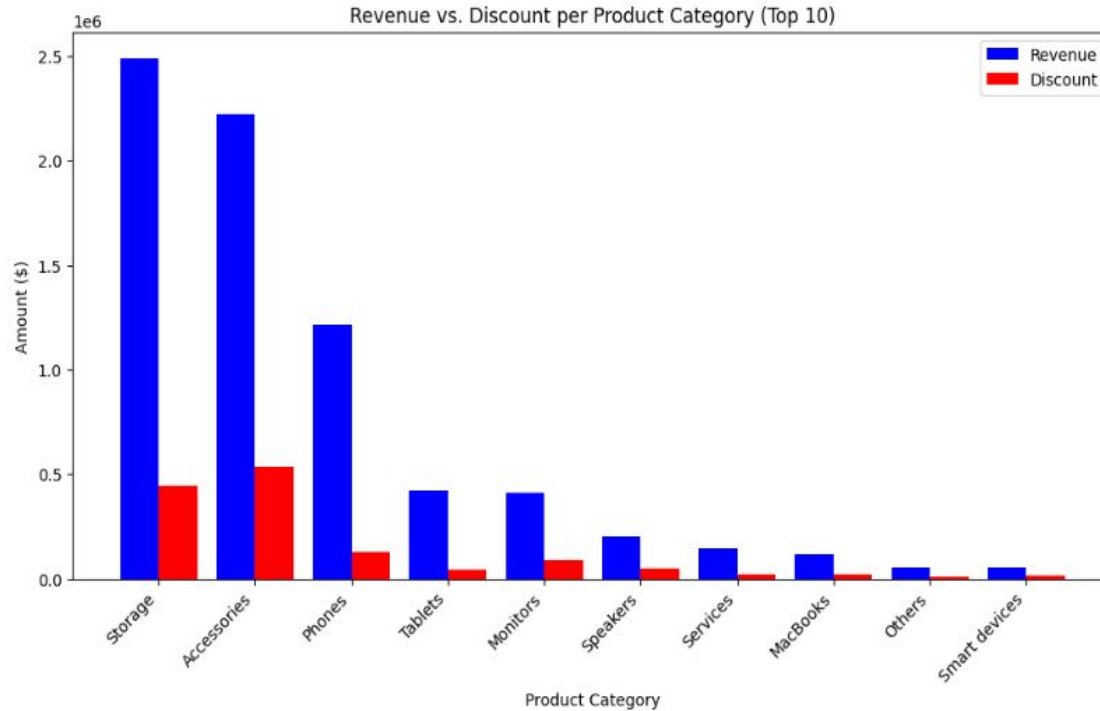Total Order Evolution
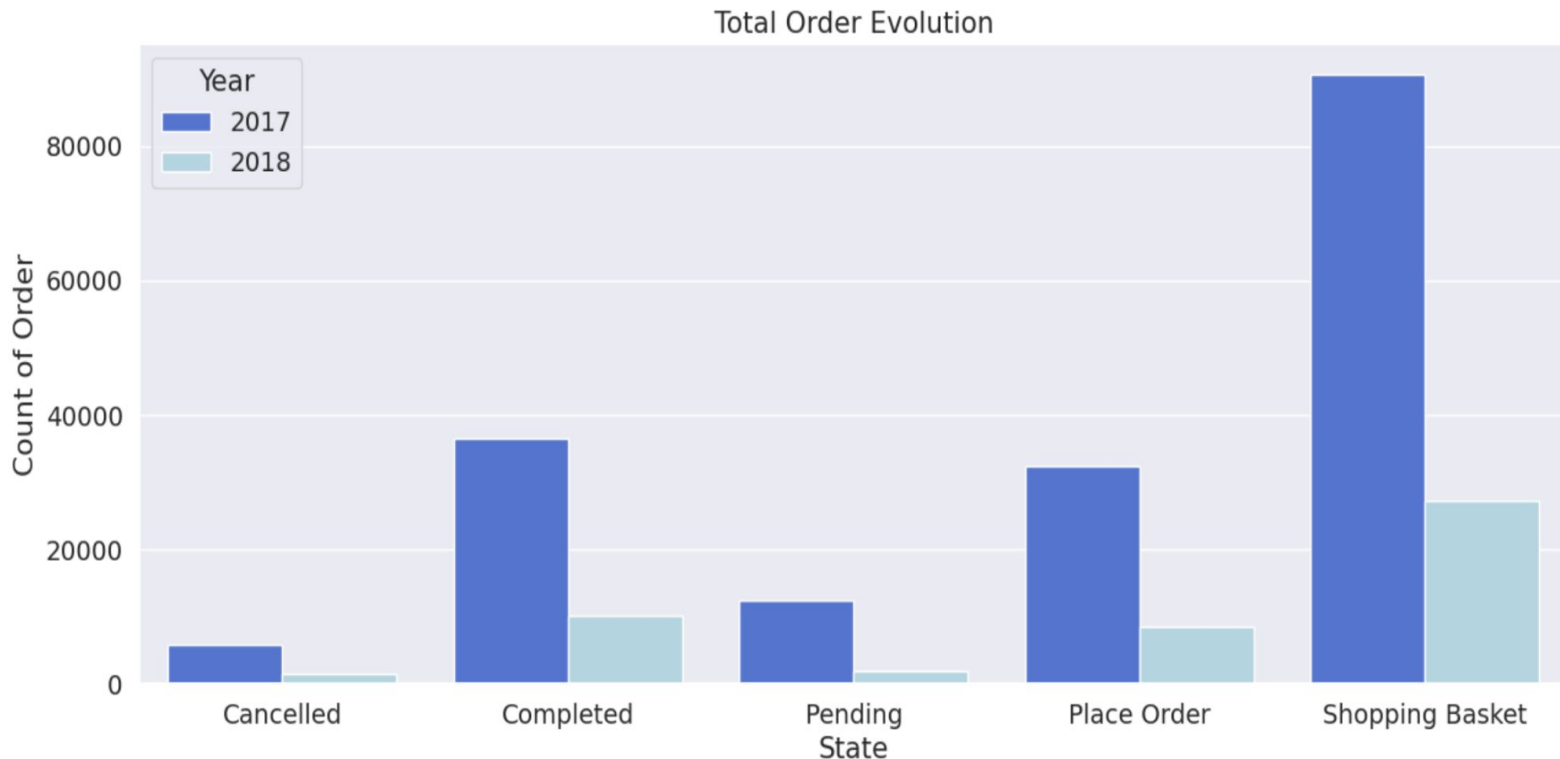
Revenue vs. discount (per category)

Revenue & seasonal effects (all categories)

Revenue peak in 2018: Nov & Dec (during Black-Friday, Cyber Monday & Holiday Season)

How discounts impact product revenues

```
revenues_co.groupby("category", as_index=False).sum("revenue").sort_values("revenue", ascending=False)
```

	category	discount	revenue
14	Storage	443701.67	2489821.70
0	Accessories	536117.80	2220030.57
7	Phones	127931.71	1214420.33
15	Tablets	40465.58	421330.94
4	Monitors	89338.16	409163.93
13	Speakers	48086.31	202447.24
11	Services	22743.17	143007.81
3	MacBooks	20052.20	115139.57
6	Others	11945.02	56924.83
12	Smart devices	14152.31	55928.61
9	Robots	7436.76	32146.19
16	Watches	4642.50	20002.70
8	Power supplies	2150.12	19841.86
2	Electric Scooter	2198.26	15116.74
5	Multimedia players	3155.21	15092.79
10	Routers	6290.34	12619.92
1	Camera	218.27	6587.04

- High-Priced should not be deeply discounted → **Revenue** is already **high**

- Low-Priced are more discount-driven → considering **controlled promotions**

- Mid-Tier not heavily dependent on discounts → **strategic discounting** (seasonal)

Revenue and discount per category

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