

Eniac Product Discounts

1. Is it beneficial to offer discounts on products?
2. Should the company focus on the Quality Segment?

Shopping at Eniac



What is attracting our customers?

- Good reviews
- Quality
- **Competitive Discounts**
- **Time of the year**

Mike is thinking of buying an iPhone

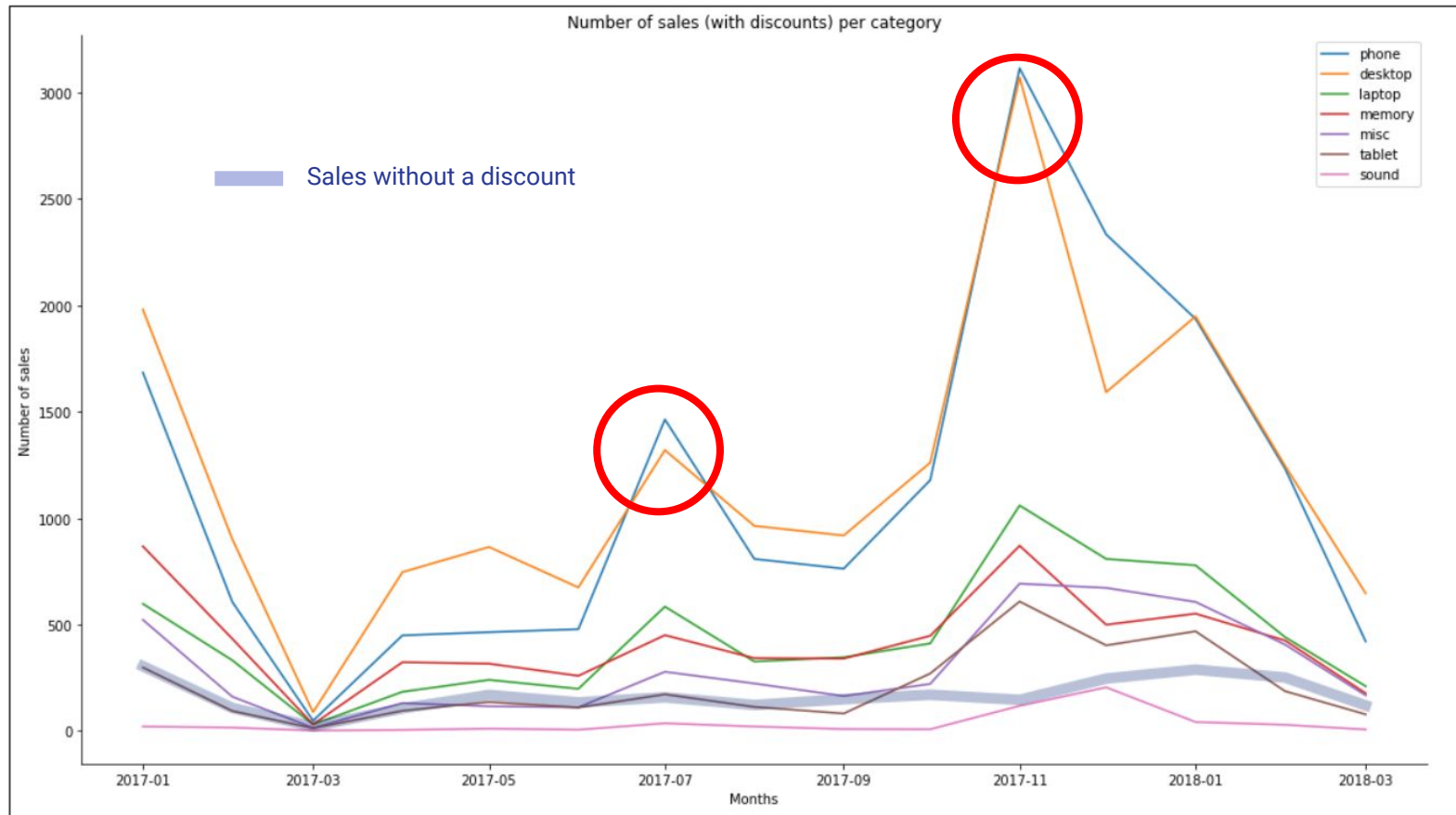
How can we encourage him to
buy from us?



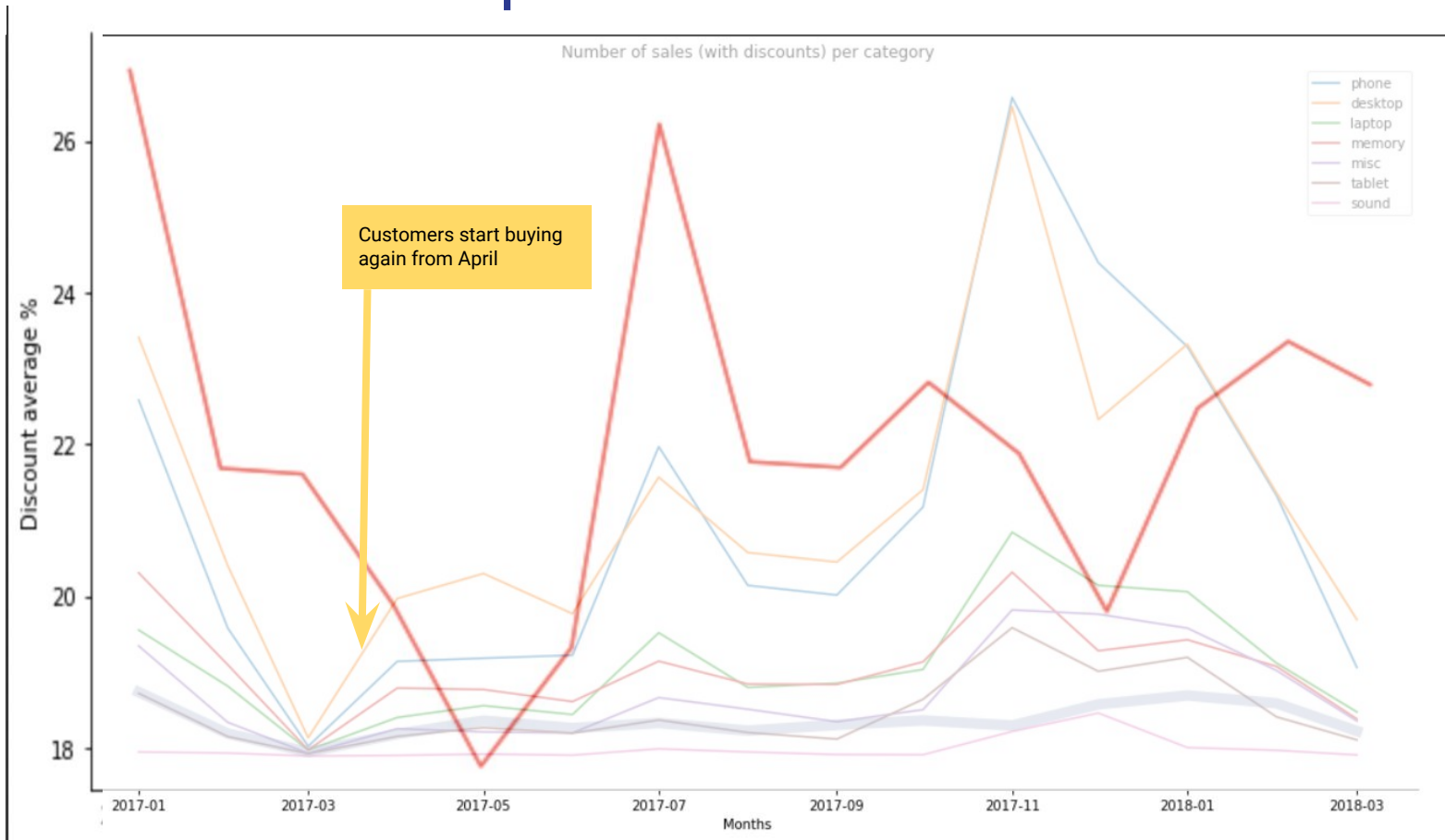


What does our data tell us?

When will Mike buy the iPhone?



Discounted sales per month



Phones discounts throughout the year



Summer Sales

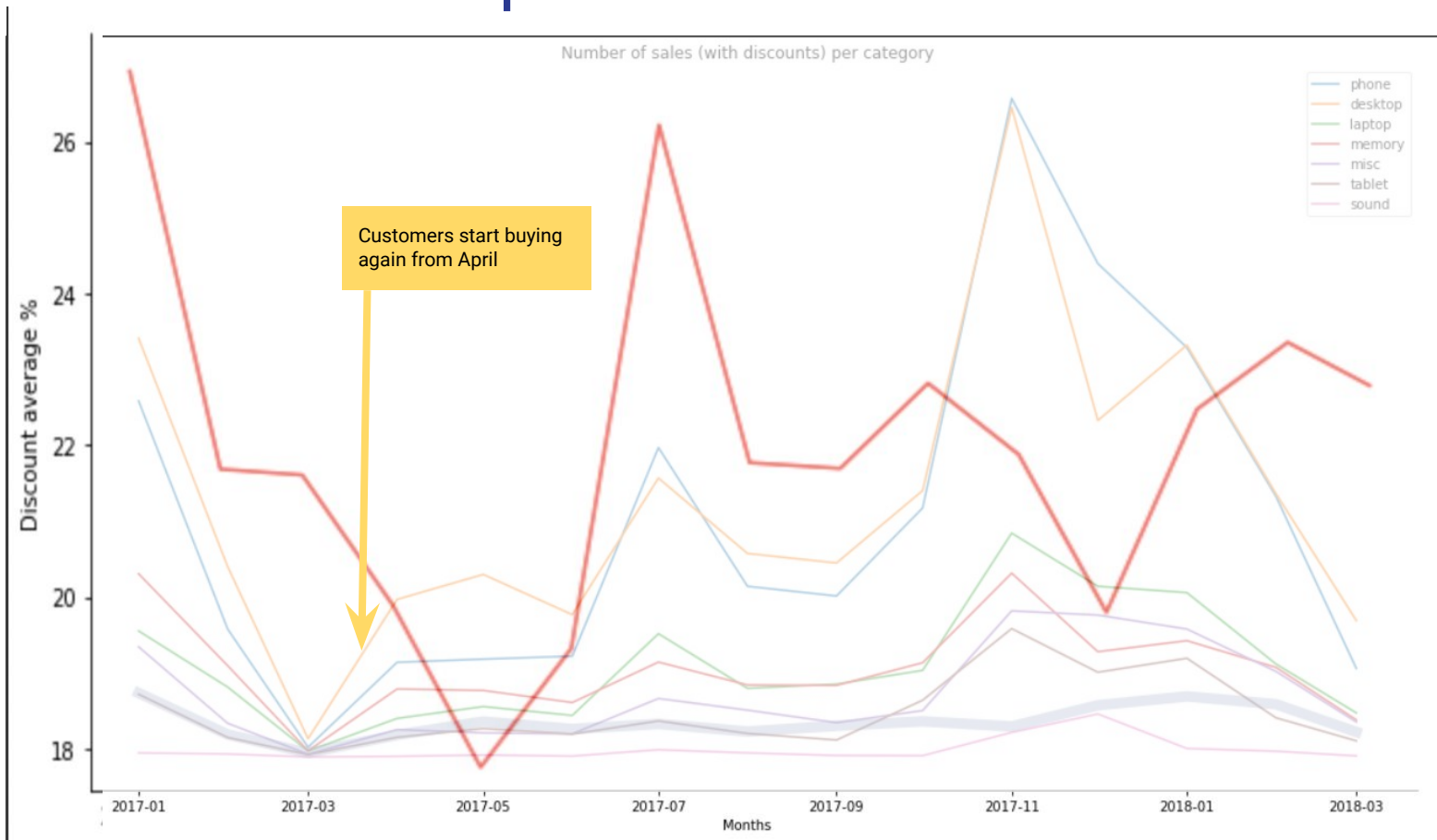
- March:
 - discounts ↑ Sales ↓
- April-May:

Customers start buying again from April

 - discounts ↓ sales ↑
- July:
 - discounts ↑ sales ↑



Discounted sales per month



Winter Sales

- November (Black Friday)
 - discounts ↓
 - sales up ↑
- Maintain discounts in December to keep sales



Recommendations

- We don't need much discounts in March
 - Increase discounts from April to May to boost revenue
 - Keep discounts in December
-

Is it beneficial to discount products?

YES

*however not for
every month*

Discounts influence
at only certain
times of the year

Discounts need to
be applied to
customers' buying
trends

Providing discounts should not
affect the Quality segment



Thank you.



How to improve data quality?

Cleaner Data

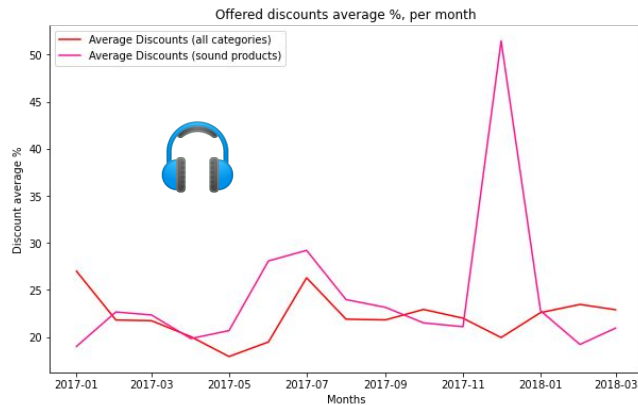
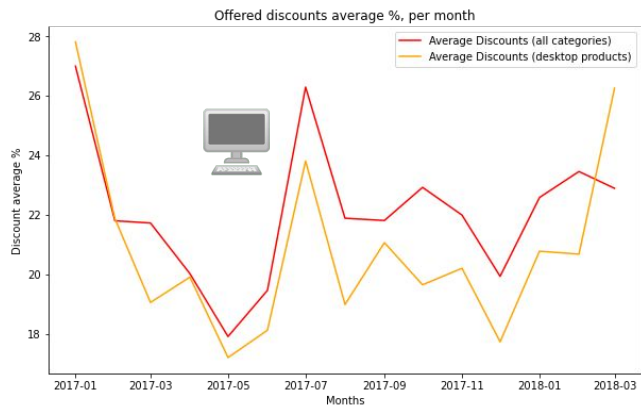
- Better categorization
- No null values
- 2 decimals only for financial values
- Data consistency across data tables

Richer Data

- **Historical price changes** for the products
 - In order lines, actual stock price at that moment, without discount.
- **Stock quantity** evolution over time
 - Do we buy more than we sell?
- **Geographical info** to apply discounts by areas/countries
- **Buyer retention**: are customers buying again after getting a discount?
- **Product release date** to see selling trend
- **Our product cost price** (to calculate profit)
- **Shipping costs** need to be provided separately



Discounts by category, every month

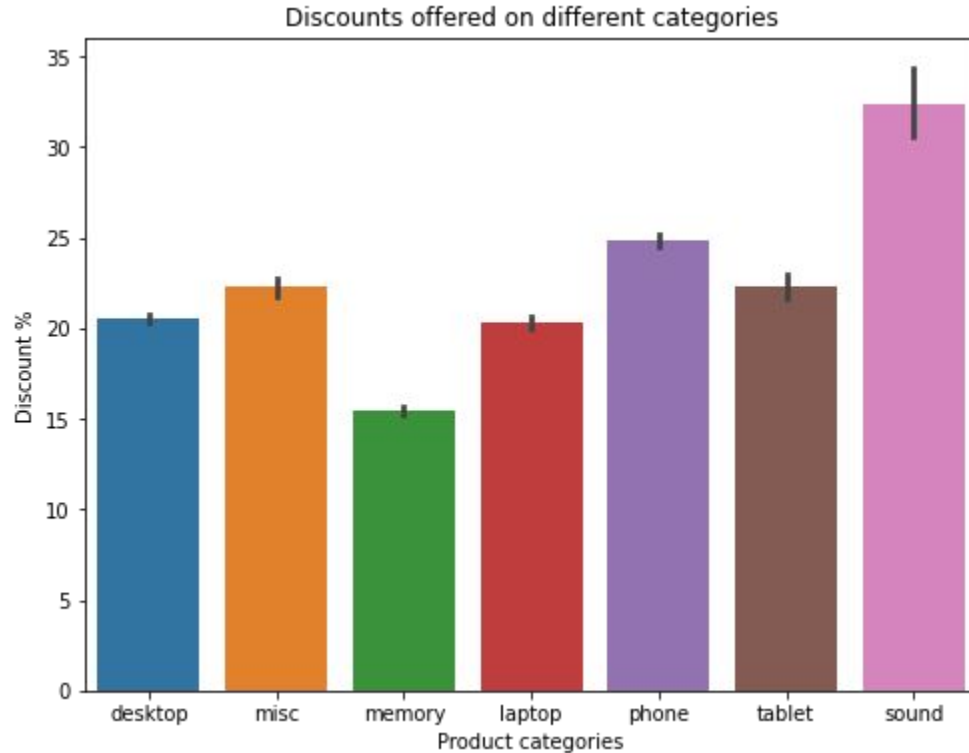


How did we categorise the products?

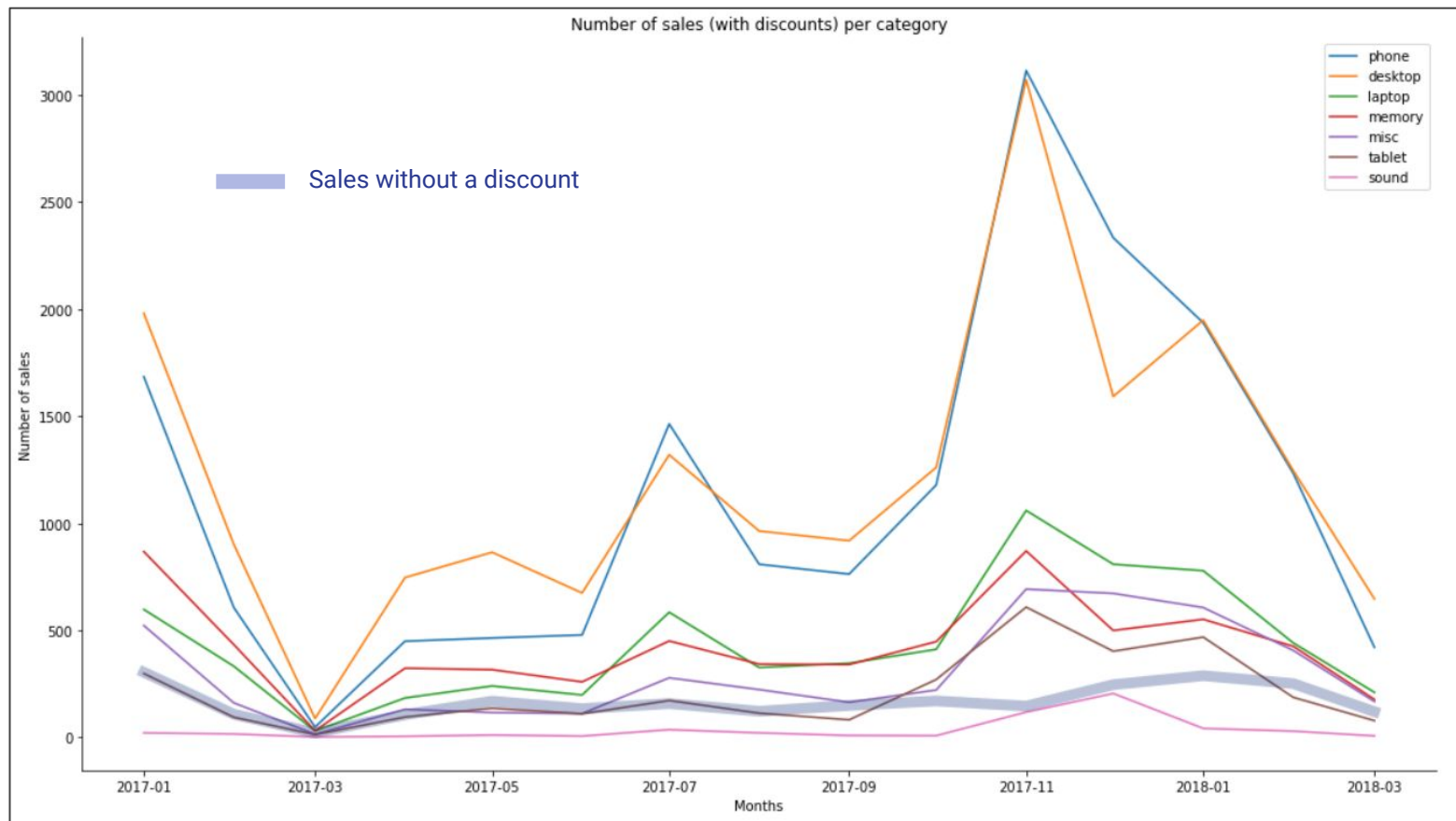
- Used key words in the name to assign to a category.
- It's not 100% accurate but gave a useable grouping
- We found the price distribution was even throughout all the categories - no outliers

```
products.loc[products['name'].str.contains('SSD|Disk|HDD|SCSI|DIMM|RAM|RAID|Memory|NAS|Rack|Drive', na=False, case=False), 'category'] = 'memory'
```

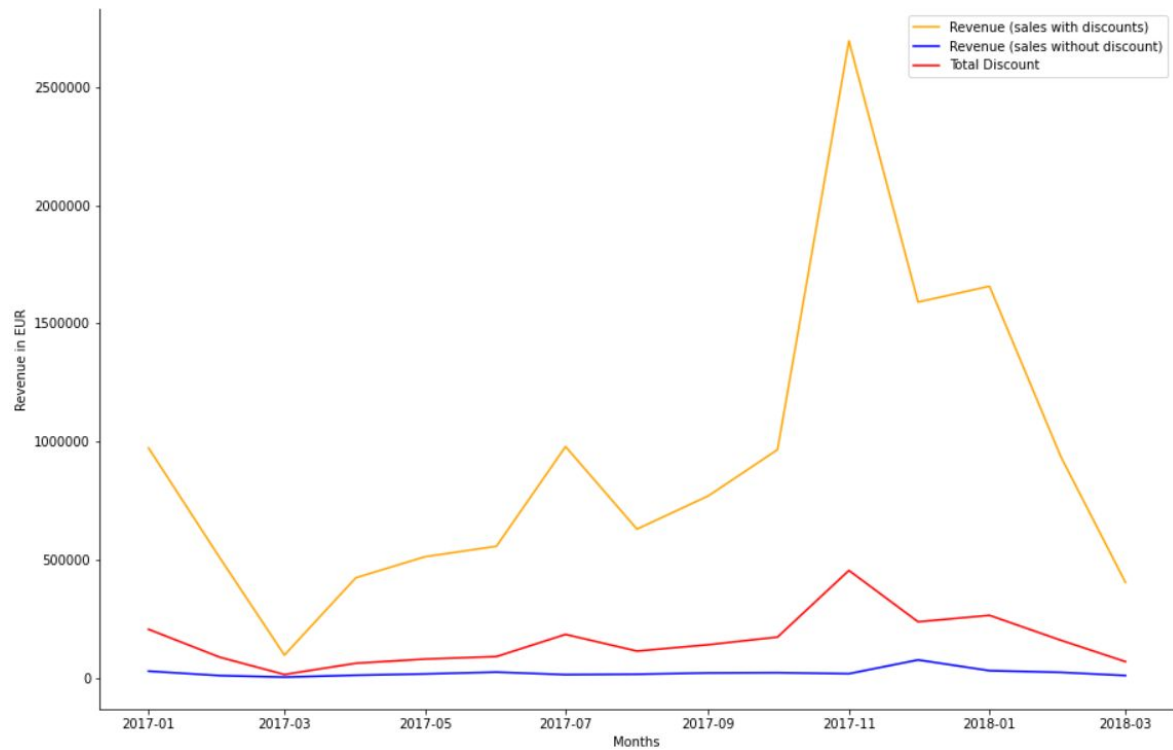
Average % of discounts offered per category



Discounted sales per month



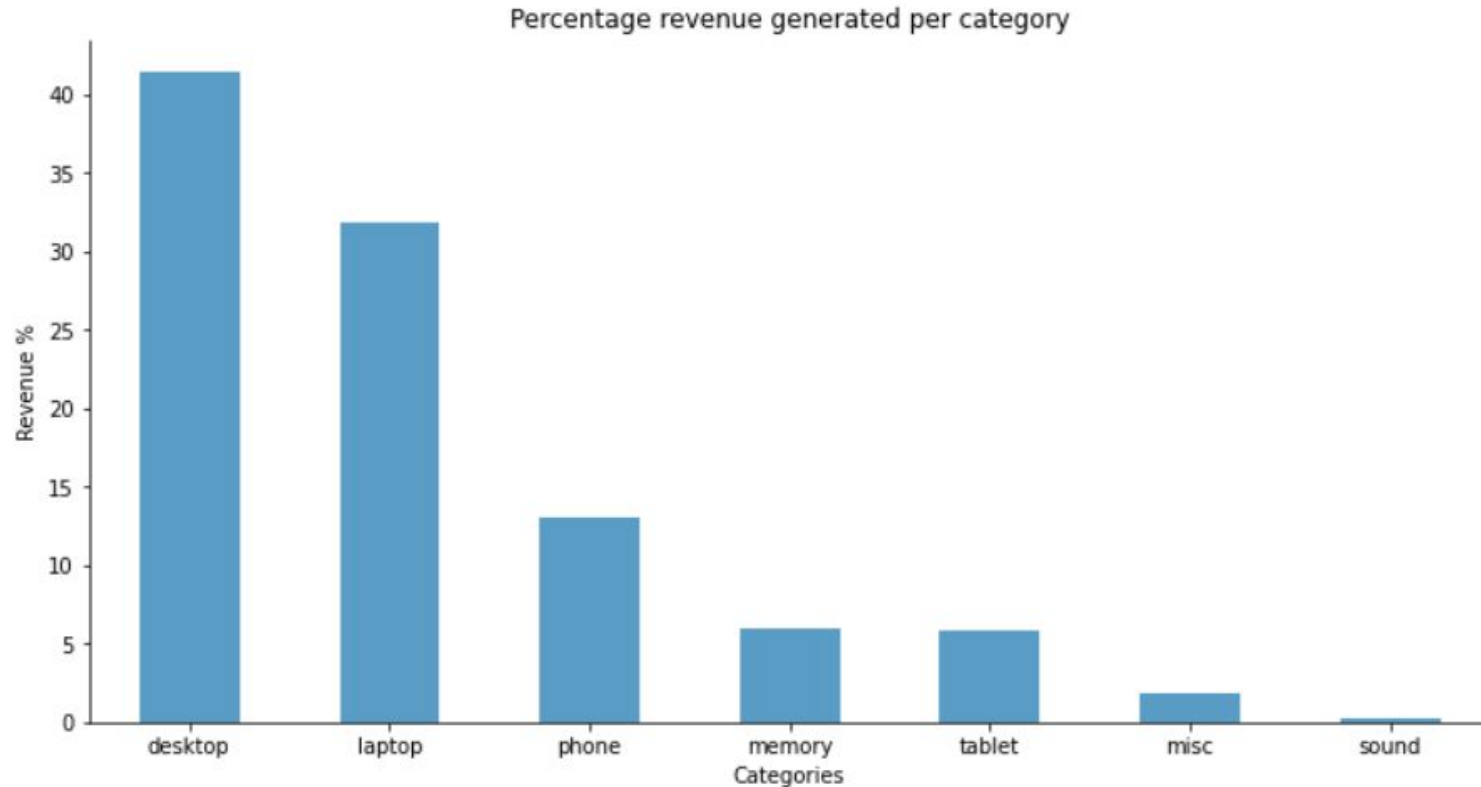
Total Revenue



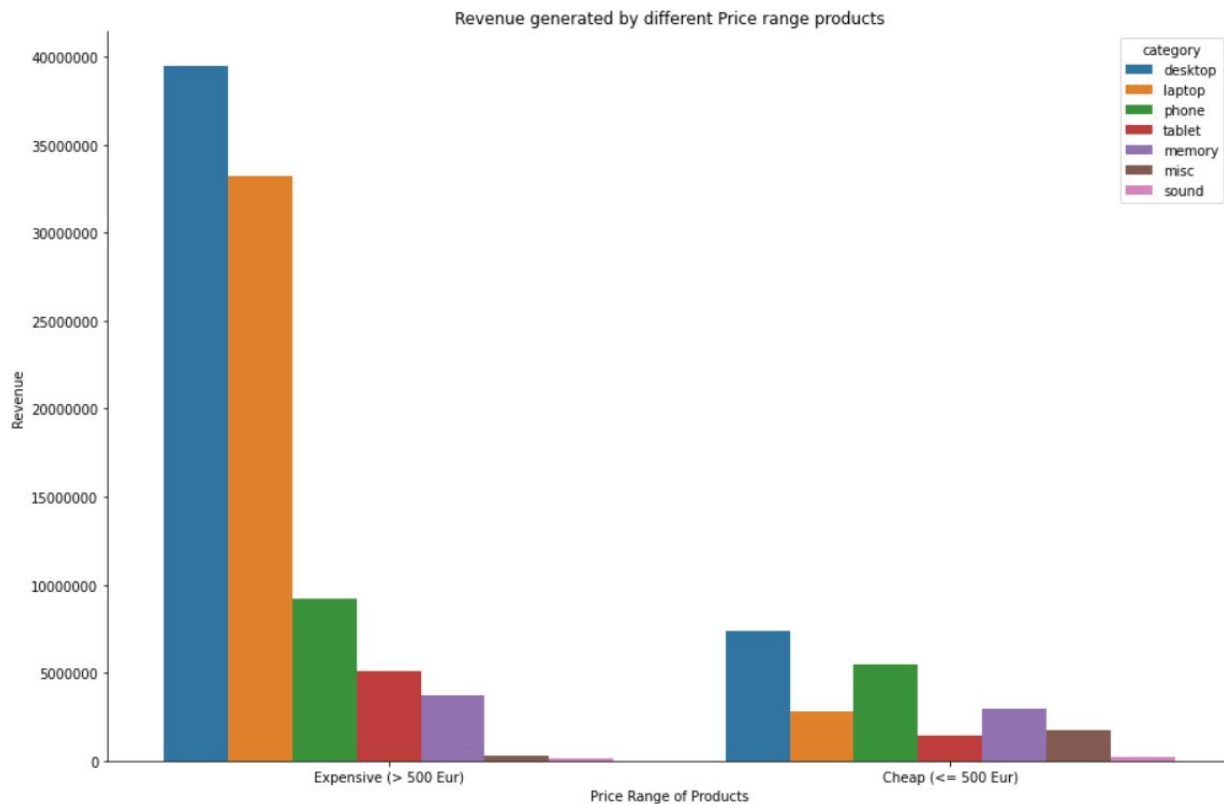
Discounts



Revenue % per category



Revenue by price range and category







Project's Questions

- How products should be classified into different categories in order to simplify reports and analysis.
- What is the distribution of product prices across different categories.
- How many products are being discounted.
- How big are the offered discounts as a percentage of the product prices.
- How seasonality and special dates (Christmas, Black Friday) affect sales.
- How could data collection be improved
- What is the time period that the dataset covers?
- What is the overall revenue for that time?
- Are there seasonal patterns in the evolution of sales?
- What are the most sold products?
- What are the products that generate the most revenue?

What our data tells us?

- Discounts don't influence people's buying decisions at certain times of the year (like March).
- In November discounts go down, but sales up
- We should maintain discounts in December
- Biggest discounts are in July, and sales go up
- We don't need discounts in March, but before May, where people start shopping again