

# **Product Discounts at Eniac**

**Data analysis for Eniac**

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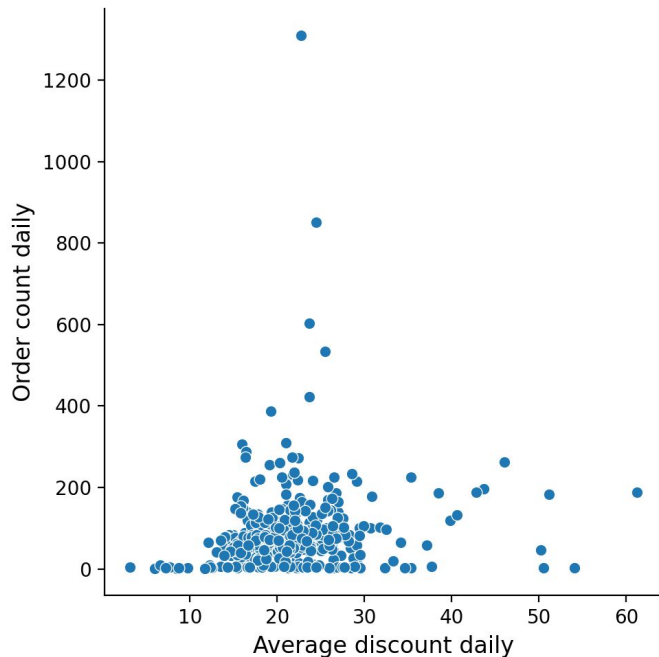
## 1.1 About Eniac

- Online marketplace for **Apple-compatible accessories**
- Provides professional tech support and consultation to its customers
- Goal-**whether or not it's beneficial to discount products**- to improve customer acquisition, satisfaction and retention, and also allow the company to grow

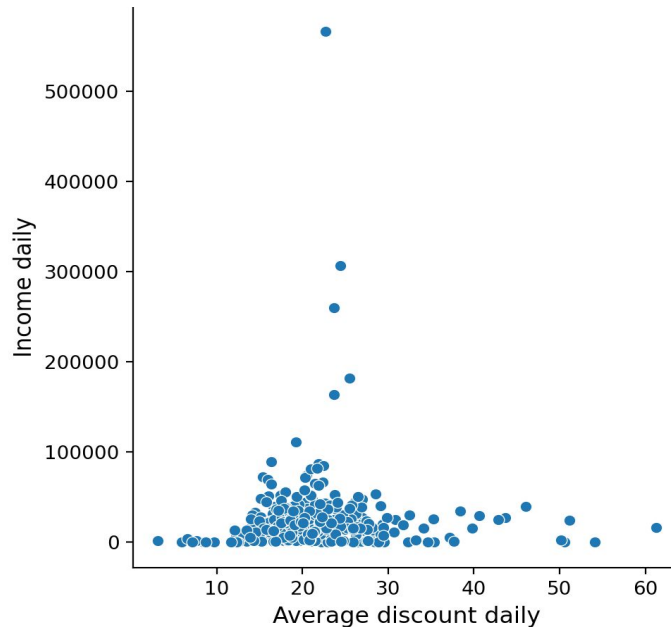
## 1.2 Data overview

Discounts between **15-30 %** have the most impact on number of orders and revenue

Average discount vs **Order count** daily for all products

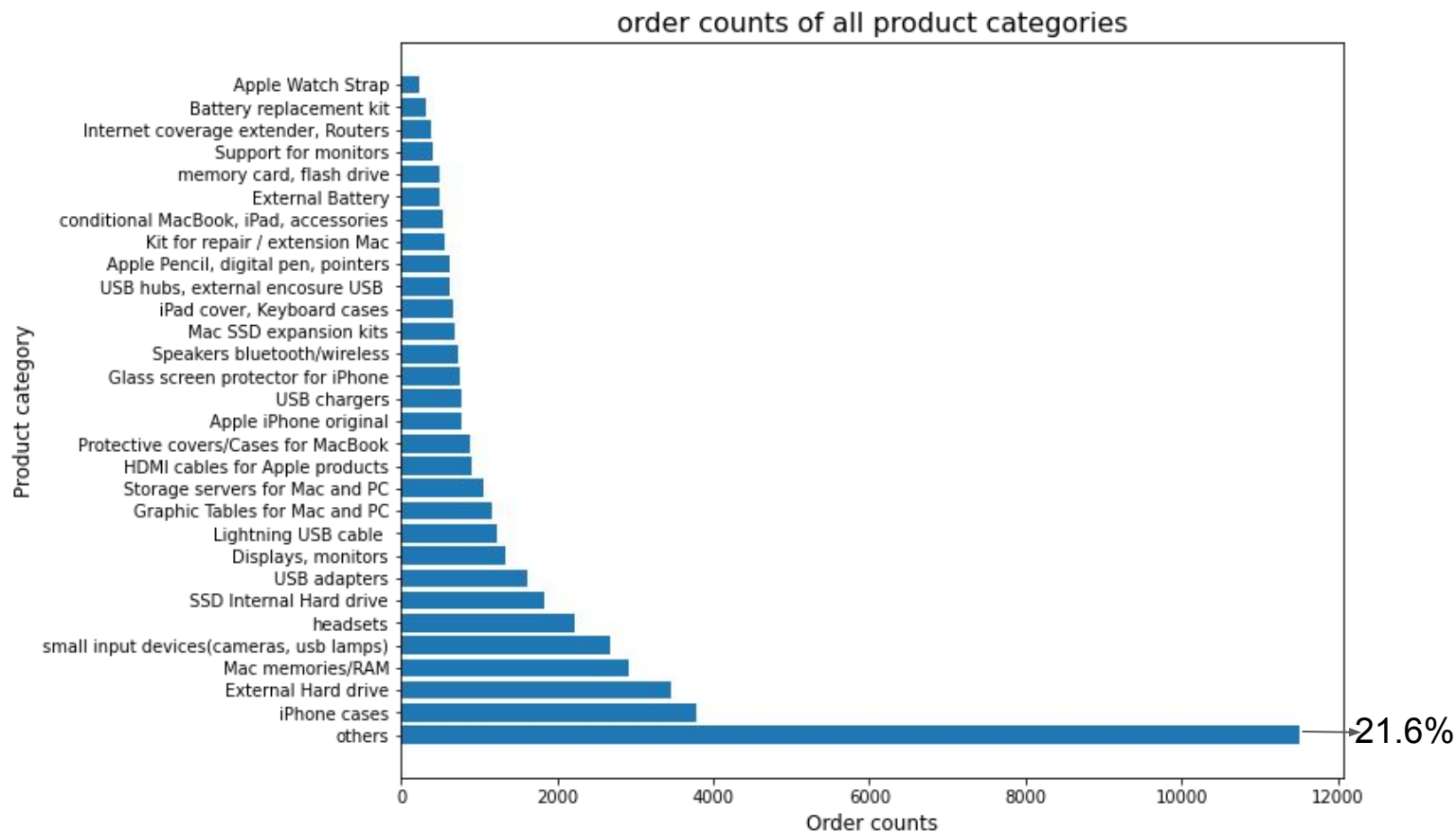


Average discount vs **revenue** daily for all products



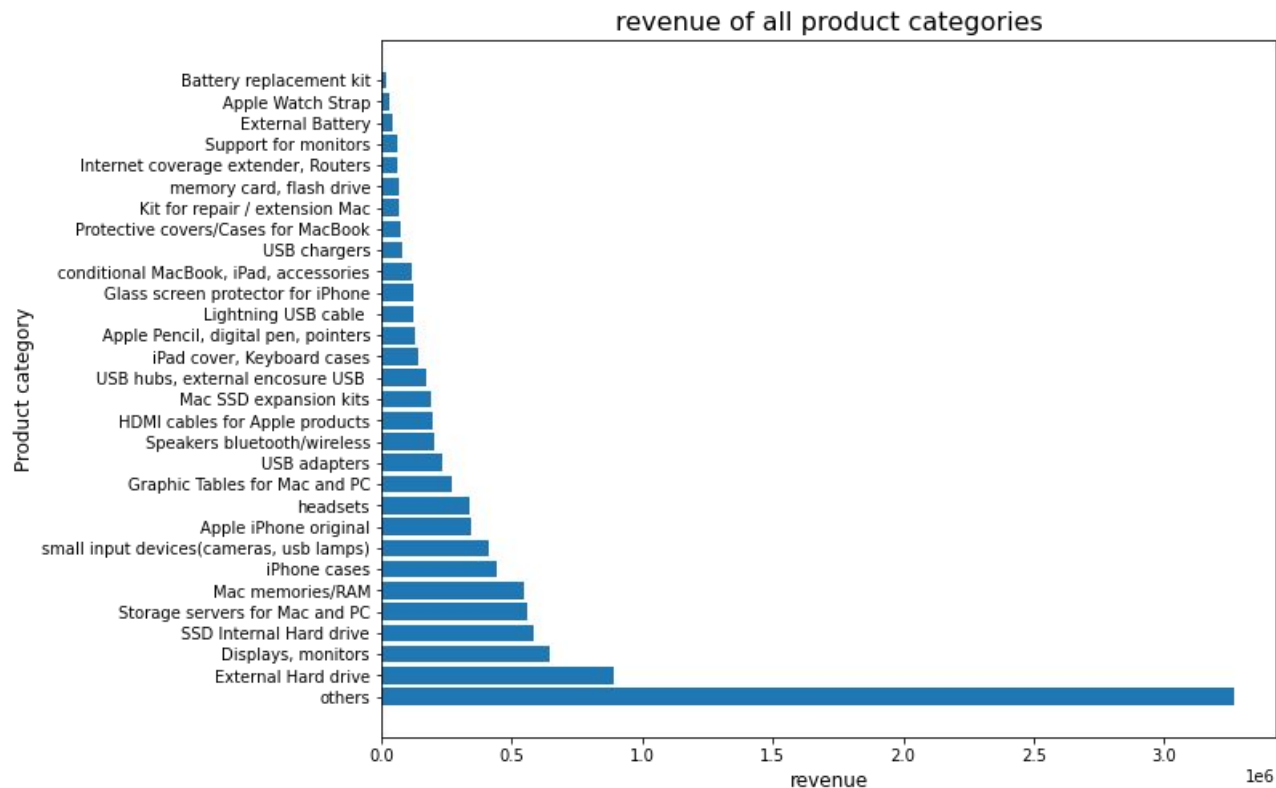
## 2.1.1 Data overview

The top three order counts : **iPhone Case** - **External Hard Drive** - **Mac Memories**



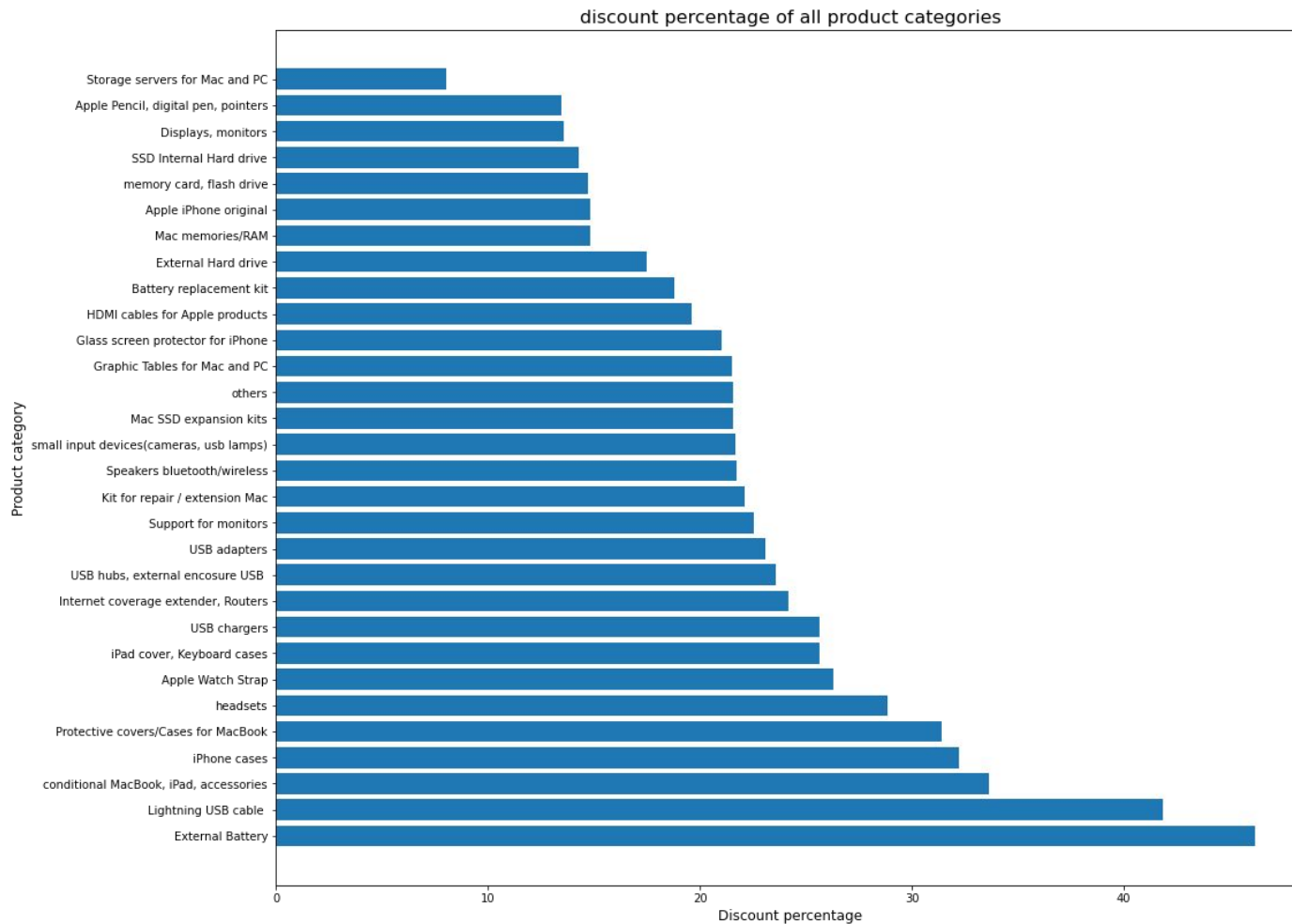
## 2.1.2 Data overview

The top three revenue : **External Hard Drive - Displays, Monitors - Internal Hard Drive**



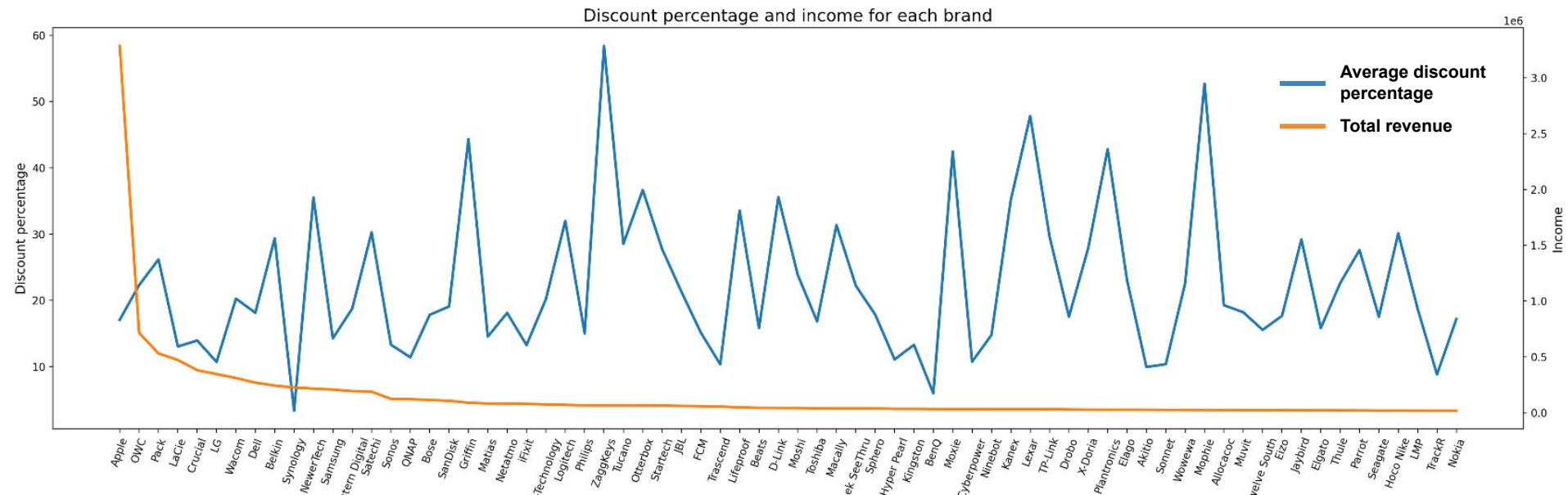
### 2.1.3 Data overview

The top three discount : **External Battery, Lightning USB Cable, MacBook, iPad Accessories**



## 2.2.1 Analysis based on brands

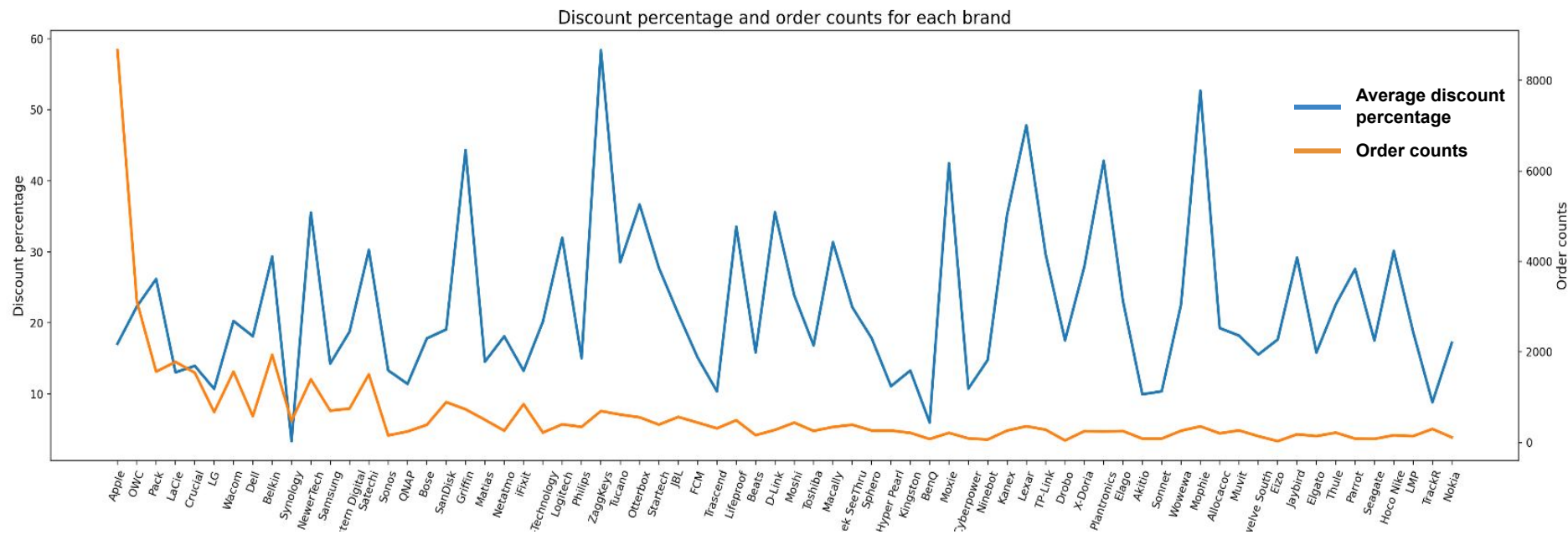
### Brands analysis based on percentage discount and revenue



Apple has a significantly larger total revenue than other brands, however the discount percentage is relatively low.



# Brands analysis based on percentage discount and order counts



Exception of the Apple products, we observe a slight correlation between average discount percentage and order counts.

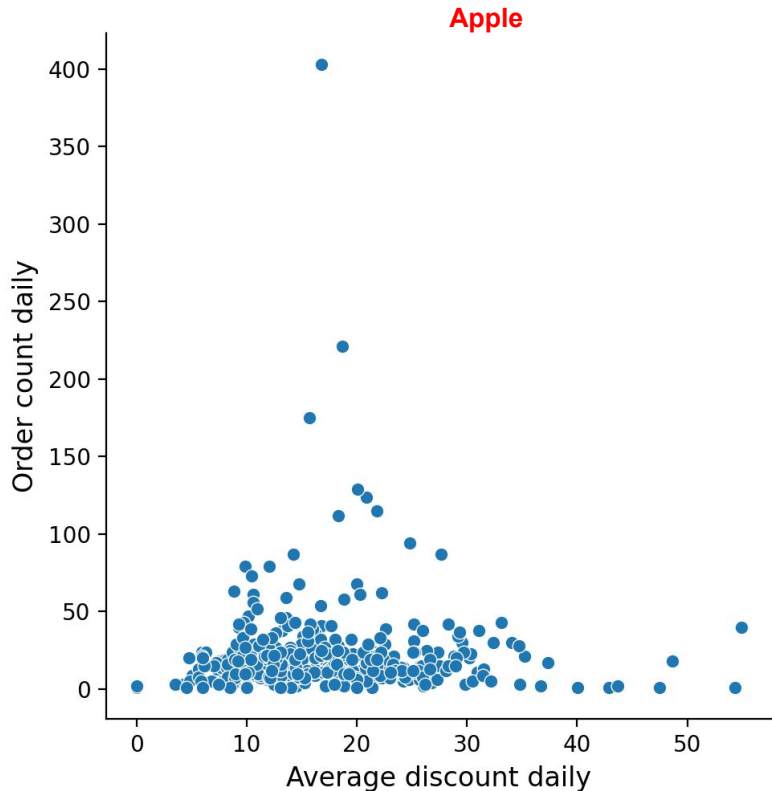
### 2.3.1 Analysis based on Apple and Non-Apple

| Brand     | Average discount percentage * | Order Counts | Total revenue |
|-----------|-------------------------------|--------------|---------------|
| Apple     | 17.08%                        | 8668         | 3287002.84    |
| Non-Apple | 23.75%                        | 31718        | 7121368.11    |

\* Average discount percentage from the original price

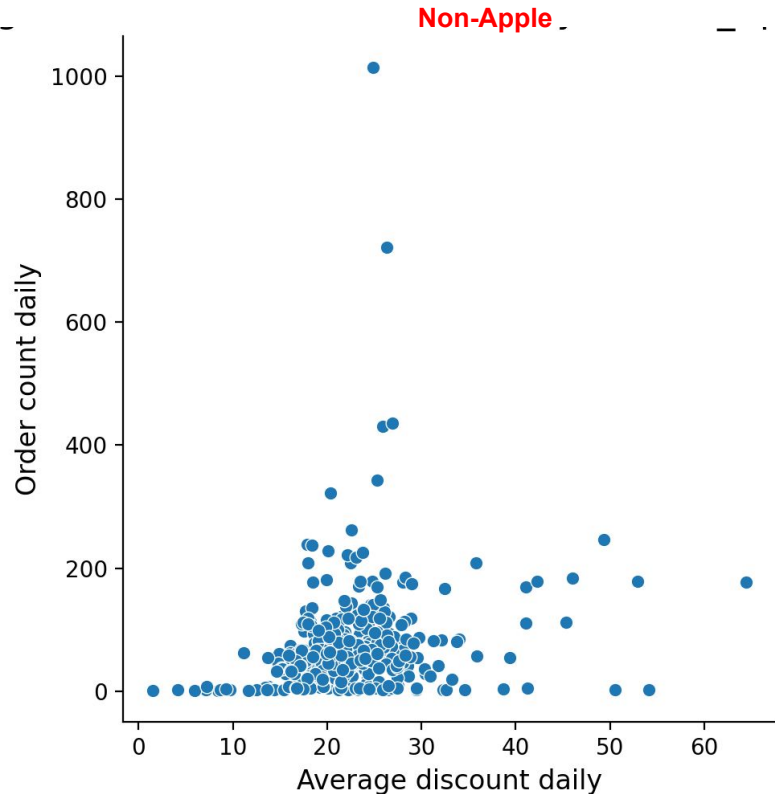
### 2.3.2 Analysis based on Apple and Non-Apple

## Average discount vs Order count daily for Apple and Non-Apple



Apple products:

daily order count is approximately proportional to average discount daily from 5% to 25%.

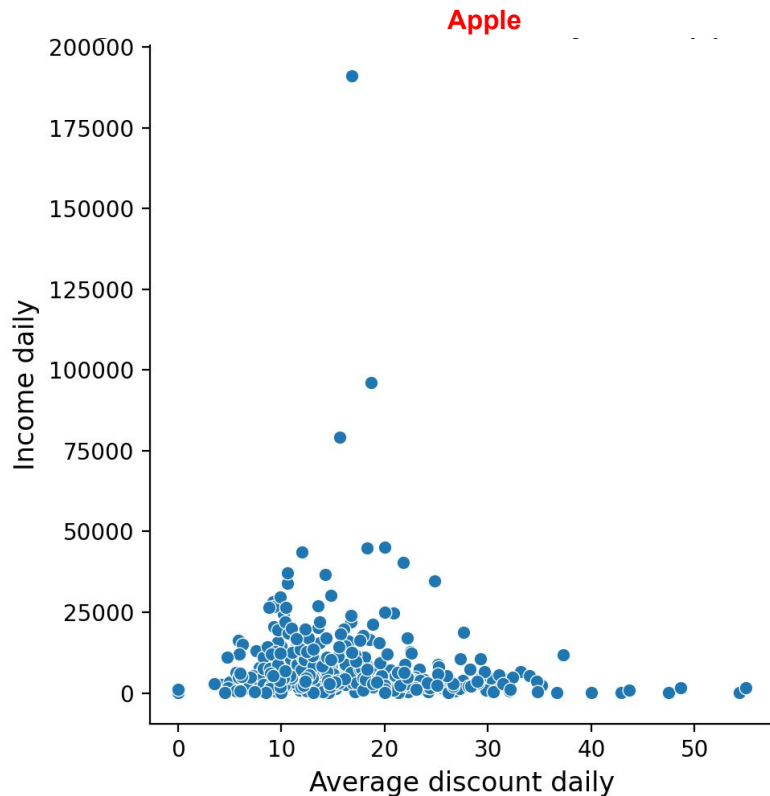


Non-Apple products:

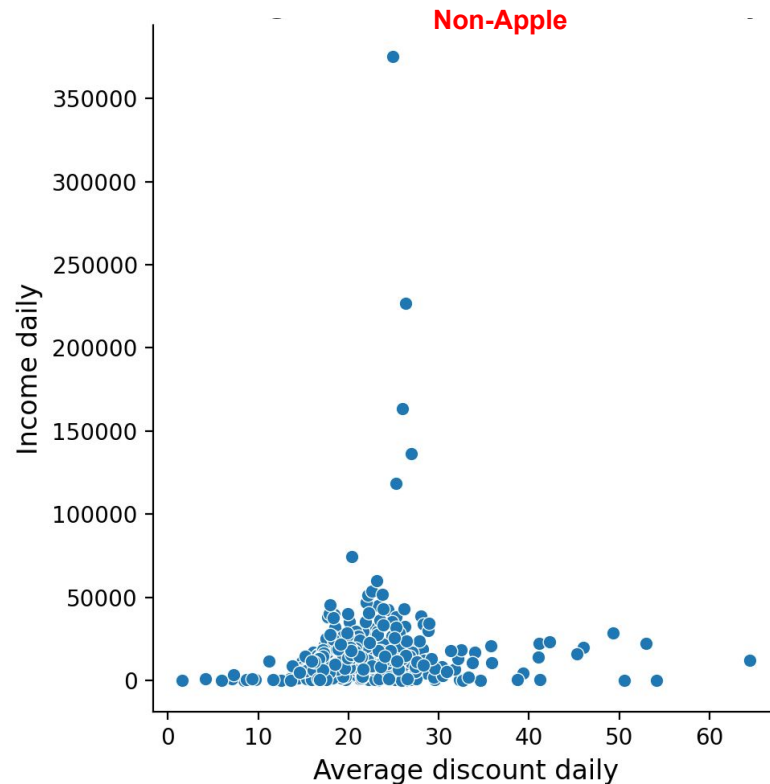
daily order count is approximately proportional to average discount daily from 15% to 30%.

### 2.3.3 Analysis based on brands

## Average discount vs revenue daily for Apple and Non-Apple products



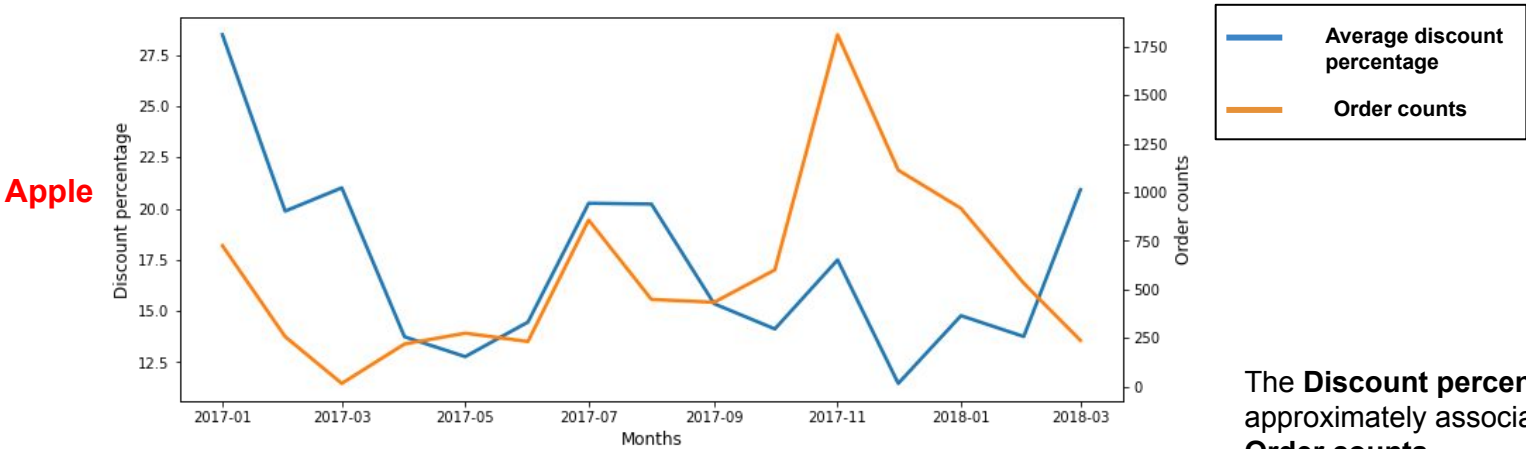
apple products:  
daily revenue is approximately proportional to average discount daily  
from 5% to 25%



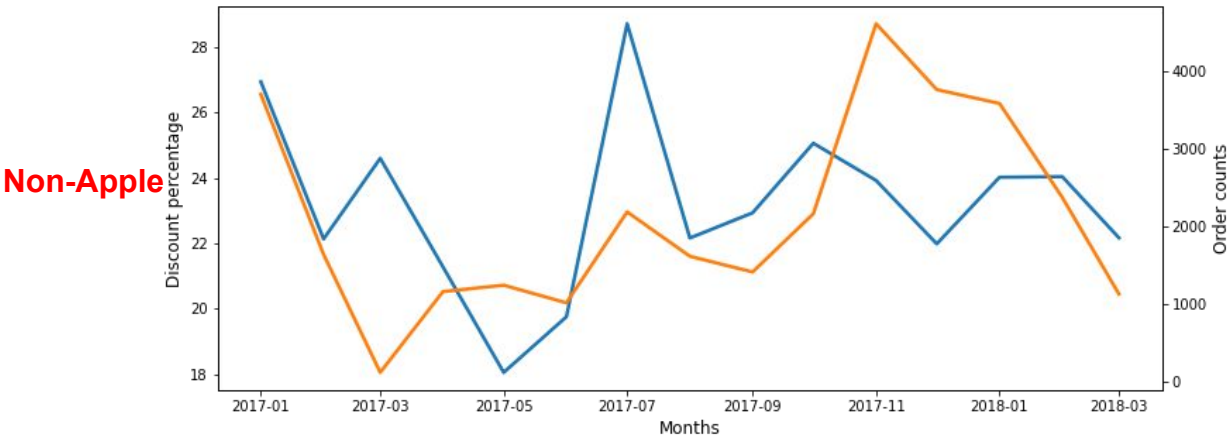
Non-Apple products:  
daily revenue is approximately proportional to average discount daily  
from 15% to 30%.

2.3.4 Analysis based on Apple and Non-Apple

Discount percentage and order counts monthly for Apple and Non-Apple products

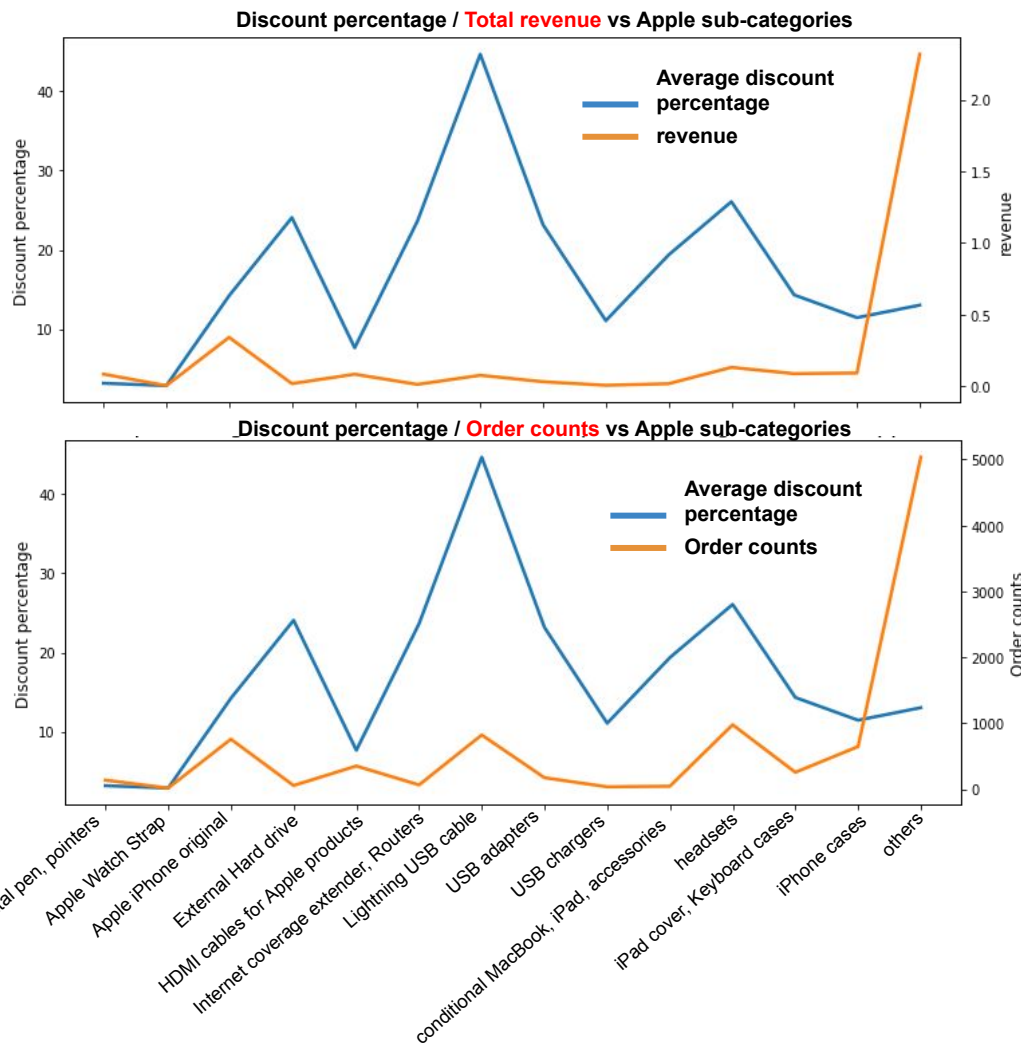


The **Discount percentage** is approximately associated with **Order counts**.



### 2.3.5 Analysis based on Apple and Non-Apple

## Discount percentage of different Apple sub-product categories

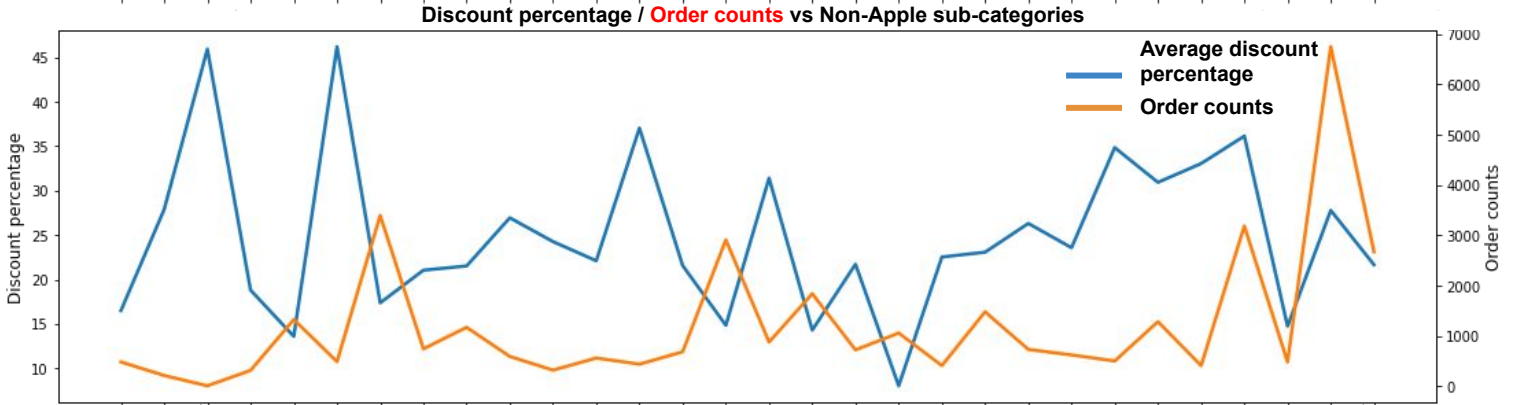
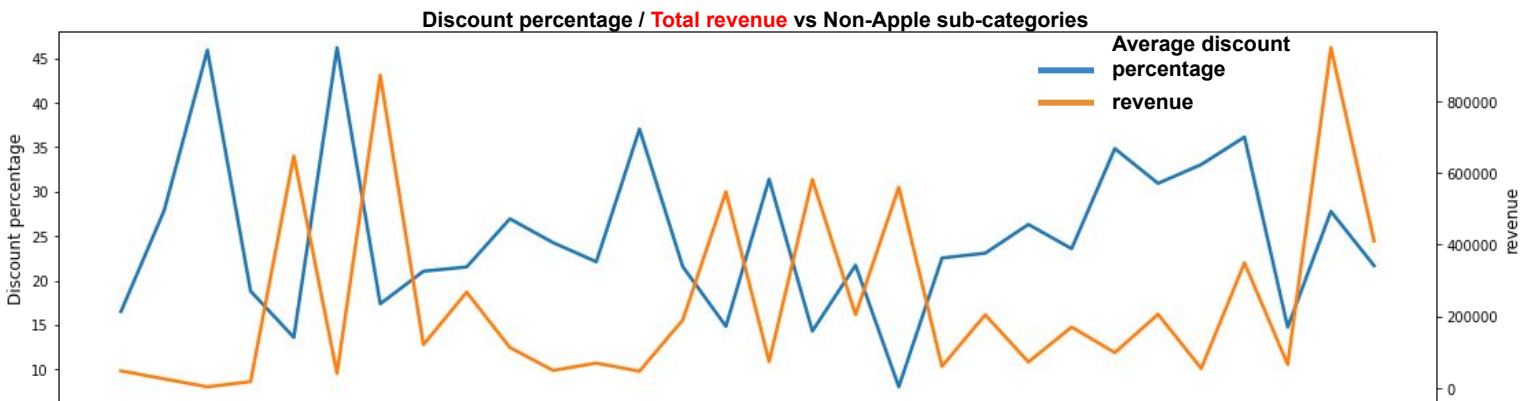


The trend of Order counts is associated with average discount, but the revenue is slightly associated with average discount for Apple products.

2.3.6 Analysis based on Apple and Non-Apple

# Discount percentage of different Non-Apple sub-product categories

For External Battery, Apple iPhone, Lightning USB cable: we should decrease discounts.



The trend of both Order counts and Total revenue is not associated with average discount for Non-Apple products.

### 3 Summary and recommendation for discounts

#### Summary

- 1) Average daily Discounts between 15-30 % have the most impact on number of orders and revenue for all products.
- 2) Apple has a significantly larger total revenue than other brands, however the discount percentage is relatively low.
- 3) For all brands, we observe a slight correlation between average discount percentage and order counts except Apple products.
- 4) For apple products, the daily revenue is approximately proportional to average discount daily from 5% to 20%.
- 5) For Non-Apple products, the daily revenue is approximately proportional to average discount daily from 10% to 30%.
- 6) For Non-Apple products: the trend of both Order counts and Total revenue is not associated with average discount.

#### Recommendation for discounts

- 1) For Apple products emphasis should be on quality rather than discount, a discount lower than 15% could be beneficial.
- 2) For Non-Apple products, a discount approximately 25% is suggested.
- 3) Specifically, for product categories like: External Battery, Apple iPhone, Lightning USB cable: we suggest decreasing the discounts.



## 4 Limitations and future recommendations for data generation

### Limitations

- 1) Only 15 month of data, Jan 2017- Mar 2018, considering that the last month (march 2018) contains only 14 days of data.
- 2) Lots of data were deleted because of low data quality.

### Future recommendations

- 1) Some further analysis on:
  - cancelled items. Why customers cancel the items?
  - the impact of negative discounts on the consumer behaviour.
- 2) Better management of the data system.

**Thank You!**