

```
from google.colab import drive
drive.mount ('/content/drive')

Drive already mounted at /content/drive; to attempt to forcibly remount, call drive.mount("/content/drive", force_remount=True).

pd=read_csv("/content/drive/My Drive/dataset/train.csv")

import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns

df_sephora = pd.read_csv("/content/drive/My Drive/dataset/train.csv")
df_sephora.head()
df_sephora.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 8000 entries, 0 to 7999
Data columns (total 17 columns):
#   Column                Non-Null Count  Dtype
---  -
0   id                     8000 non-null   int64
1   brand                  8000 non-null   object
2   category               8000 non-null   object
3   name                   8000 non-null   object
4   size                   8000 non-null   object
5   rating                 8000 non-null   float64
6   number_of_reviews      8000 non-null   int64
7   love                   8000 non-null   int64
8   price                  8000 non-null   float64
9   value_price            8000 non-null   float64
10  URL                    8000 non-null   object
11  MarketingFlags         8000 non-null   bool
12  options                8000 non-null   object
13  details                8000 non-null   object
14  how_to_use             8000 non-null   object
15  ingredients             8000 non-null   object
16  exclusive              8000 non-null   int64
dtypes: bool(1), float64(3), int64(4), object(9)
memory usage: 1007.9+ KB
```

```
df_sephora = df_sephora.drop(['id','size','size','URL','how_to_use','ingredients','details'],axis=1)
df_sephora.head()
```

	brand	category	name	rating	number_of_reviews	love	price
0	SEPHORA COLLECTION	no category	Gift Card	5.0	46	0	50.0
1	SEPHORA COLLECTION	no category	Happy Birthday Gift Card	0.0	0	0	50.0

```
df_sephora.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 8000 entries, 0 to 7999
Data columns (total 11 columns):
#   Column                Non-Null Count  Dtype
---  -
0   brand                  8000 non-null   object
1   category               8000 non-null   object
2   name                   8000 non-null   object
3   rating                 8000 non-null   float64
4   number_of_reviews      8000 non-null   int64
5   love                   8000 non-null   int64
6   price                  8000 non-null   float64
7   value_price            8000 non-null   float64
8   MarketingFlags         8000 non-null   bool
9   options                8000 non-null   object
10  exclusive              8000 non-null   int64
```

```
dtypes: bool(1), float64(3), int64(3), object(4)
memory usage: 632.9+ KB

df_sephora.head()

pd.set_option('display.max_rows', None)
df_sephora.category.value_counts() #jumlah kategori produk
```

Perfume	620
Moisturizers	398
Face Serums	334
Value & Gift Sets	241
Face Wash & Cleansers	225
Face Masks	218
Hair Styling Products	213
Rollerballs & Travel Size	212
Face Brushes	176
Eye Creams & Treatments	171
Eye Palettes	170
Shampoo	162
Lipstick	162
Foundation	153
Highlighter	152
Cologne	148
Mascara	142
Conditioner	130
Candles & Home Scents	123
Face Primer	121
Eyeliners	111
Setting Spray & Powder	104
Makeup	104
Mini Size	95
Eye Brushes	94
Body Lotions & Body Oils	93
Lotions & Oils	92
Eyebrow	92
Beauty Supplements	92
Concealer	87
Toners	82
Perfume Gift Sets	81
Face Oils	78
Eyeshadow	75
Mists & Essences	74
Hair	73
Scalp & Hair Treatments	72
Lip Balms & Treatments	69
Hair Masks	65
Lip Gloss	61
Blush	59
Lip Balm & Treatment	59
Face Sunscreen	55
Sheet Masks	55
Bath & Shower	51
Nail	50
False Eyelashes	48
Hair Accessories	46
Facial Peels	46
Skincare	46
Bronzer	43
Facial Cleansing Brushes	41
Body Wash & Shower Gel	40
Exfoliators	40
Dry Shampoo	39
Hair Oil	39
Anti-Aging	36
Blemish & Acne Treatments	35

```
sephora_brands = df_sephora.brand.value_counts()
sephora_brands.head(10) #brand produk terbanyak
```

```
SEPHORA COLLECTION    492
CLINIQUE               211
TOM FORD               150
tarte                  143
Kiehl's Since 1851    122
Dior                   118
Fresh                  108
Lancôme                104
Bumble and bumble      99
MAKE UP FOR EVER       95
Name: brand, dtype: int64
```

```
sephora_brands.tail(10) #brand paling sedikit
```

```
8Greens                1
Saint Jane Beauty      1
Cellu-cup              1
Too Cool For School    1
Google                 1
Conture                1
Cocofloss              1
Makeup Eraser          1
Flora + Bast           1
SHHHOWERCAP           1
Name: brand, dtype: int64
```

```
rand_love=pd.DataFrame(df_sephora.groupby(['brand'])['love'].mean()).reset_index().sort_values(by='love', ascending=False).reset_index().drop
brand_love.head(10) #brand paling banyak di love
```

	brand	love
0	stila	140942.857143
1	Buxom	138700.000000
2	NARS	102575.000000
3	Anastasia Beverly Hills	92904.687500
4	Drunk Elephant	84009.090909
5	Makeup Eraser	79500.000000
6	Urban Decay	76271.428571
7	FENTY BEAUTY by Rihanna	71598.412698
8	Tatcha	66725.925926
9	The Ordinary	66062.857143

```
brand_rating=pd.DataFrame(df_sephora.groupby('brand')['rating'].mean()).reset_index().sort_values(by='rating', ascending=False).reset_index()
brand_rating.head(10) #rating tertinggi
```

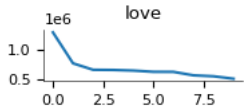
```

    brand    rating
0    Montblanc  5.000000
1    Four Sigmatic  5.000000
2    Aether Beauty  5.000000
3        Golde  4.875000
4        ReFa  4.833333
5    RODIN olio lusso  4.812500
Product_love = pd.DataFrame(df_sephora.groupby(['brand', 'name'])['love'].mean()).reset_index().sort_values(by='love', ascending=False).reset_
Product_love.head(10)  #produk yang paling banyak disukai

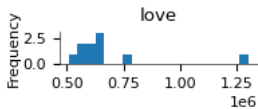
```

	brand	name	love
0	KVD Vegan Beauty	Everlasting Liquid Lipstick	1300000.0
1	NARS	Radiant Creamy Concealer	770700.0
2	Anastasia Beverly Hills	Brow Wiz	660000.0
3	Laura Mercier	Translucent Loose Setting Powder	657100.0
4	NARS	Blush	646600.0
5	FENTY BEAUTY by Rihanna	Pro Filt'r Soft Matte Longwear Foundation	625500.0
6	HUDA BEAUTY	Obsessions Eyeshadow Palette	624600.0
7	Anastasia Beverly Hills	Eye Shadow Singles	565200.0
8	Anastasia Beverly Hills	Liquid Lipstick	549000.0
9	Urban Decay	All Nighter Long-Lasting Makeup Setting Spray	506800.0

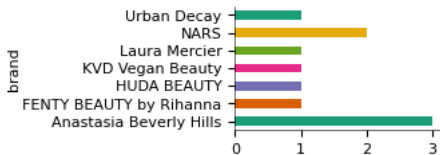
Values



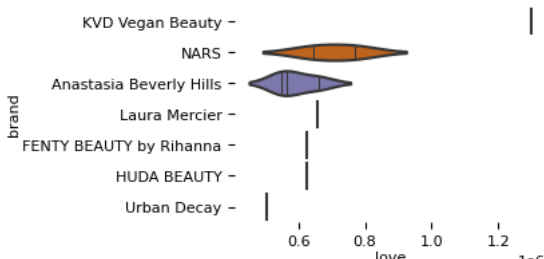
Distributions



Categorical distributions



Faceted distributions



```

skincare = pd.DataFrame(df_sephora.loc[df_sephora.category == 'Skincare', :].sort_values(by='rating',ascending=False))
skincare.head()

```

```

    brand category      name rating number_of_reviews  love price value_price MarketingFlags options exclusive
646    Jack Black Skincare Beard Lube® Conditioning Shave Mini 5.0      8 1000 11.5      11.5      True  no options      0
1799   Marvis    Skincare  Jasmin Mint Toothpaste Mini 5.0      19 3900 6.0      6.0      True  no options      0
202   CLINIQUE   Skincare  Mini Dramatically Different 4.5      3000 14700 15.0      15.0     False  no options      0
ratahargaskincare = skincare["price"].mean()
ratahargaskincare

16.91304347826087

skincare['rata - rata harga'] = ratahargaskincare

skincare.head(5)
```

	brand	category	name	rating	number_of_reviews	love	price	value_price	MarketingFlags	options	exclusive	rata rata harga
646	Jack Black	Skincare	Beard Lube® Conditioning Shave Mini	5.0	8	1000	11.5	11.5	True	no options	0	16.91304347826087
1799	Marvis	Skincare	Jasmin Mint Toothpaste Mini	5.0	19	3900	6.0	6.0	True	no options	0	16.91304347826087

```

perfume = pd.DataFrame(df_sephora.loc[df_sephora.category == 'Perfume', :].sort_values(by='rating',ascending=False))
perfume.head()
```

	brand	category	name	rating	number_of_reviews	love	price	value_price	MarketingFlags	options	exclusive
1700	Versace	Perfume	Bright Crystal & Dylan Blue Pour Femme Ovetto ...	5.0	61	12100	30.0	30.0	True	- 0.34 oz/ 10 mL Eau de Toilette Spray	1
4809	CLINIQUE	Perfume	Clinique Happy Heart	5.0	4	1400	53.0	53.0	True	- 1 oz/ 30 mL Eau de Parfum Spray - 1.7 oz/ 5...	0
825	TOM	Perfume	Champaca	5.0	18	2400	240.0	240.0	False	- 1.7 oz/ 50 mL Eau de	0

```

ratahargaperfume = perfume["price"].mean()
ratahargaperfume

109.52580645161291

perfume['rata - rata harga'] = ratahargaperfume
perfume.head(5)
```

	brand	category	name	rating	number_of_reviews	love	pr:
1700	Versace	Perfume	Bright Crystal & Dylan Blue Pour Femme Ovetto ...	5.0	61	12100	3
Cliniaue							