



Ultra Web Scraping

➤ Ultra Skin Care Products ➤

By: Kristin Teves

BASIC SKIN-CARE STEPS

MORNING ROUTINE



Cleanser



Moisturizer



Broad Spectrum
Sunscreen (SPF 30+)

EVENING ROUTINE



Cleanser



Serums, Toners,
Essences, Treatments



Moisturizer



Preliminary Questions:

Customer Perspective:

1. What categories of skin care products does Ulta carry?
2. Which are the most reviewed categories and brands?

Business Perspective:

3. Which brands have the most products?
4. Are there brands that don't receive enough attention (reviews)?

Ulta Skin Care Scrapping

Scraped 5 Categories:

- Cleansers
- Moisturizers
- Treatment & Serums
- Eye Treatments
- Suncare

Process:

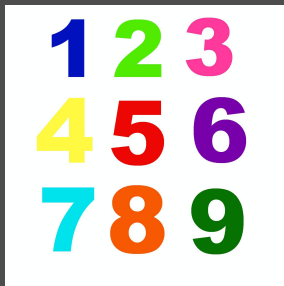
- Using Scrapy, scraped each Category and made separate .csv files
- Concatenate 5 .csv files to make 1 dataframe

The image shows a screenshot of the Ulta Beauty website. The top navigation bar includes links for 'Find a Store', 'Email & Text Signup', 'Gift Cards', 'Sign In', and 'Rewards'. The left sidebar lists various product categories: 'Black Friday Preview', 'Shop by Brand', 'New Arrivals', 'Makeup', 'Nails', 'Skin Care', 'Hair', 'Tools & Brushes', 'Fragrance', 'Bath & Body', 'Men', 'Ulta Beauty Collection', 'Gifts', 'Sale & Coupons', 'Current Ad', 'Beauty Tips', 'Conscious Beauty', 'Book a Beauty Service', and 'Shop Safely'. The main content area is titled 'Skin Care' and features a 'Skin Care New Arrivals' section. This section displays four product cards: 'CLINIQUE Dewy For Days Moisture Surge Set' (1), 'PMD Refinish Acid Serum' (\$59.00), 'HERO COSMETICS Mighty Patch Duo' (\$6.99), and 'BEAUTYBIO GloPRO Microneedling Rejuvenation Tool' (\$199.00). Each card includes a product image, name, price, and a star rating. Below the 'Skin Care New Arrivals' section, there is a 'Moisturizers' section. This section includes a filter sidebar with options for 'CATEGORY', 'SKIN TYPE', 'CONCERN', 'PREFERENCE', and 'BRAND'. The 'Moisturizers' section also displays a list of products with their names, prices, and ratings. The bottom of the page shows '1329 Results' and a 'Sort by' dropdown menu.

Data Cleaning

Split Category Column

Created Category
and Type Column



Numerical Values

Converted Price,
Rating, and Size into
float data type

Binned pricing based on affordability:

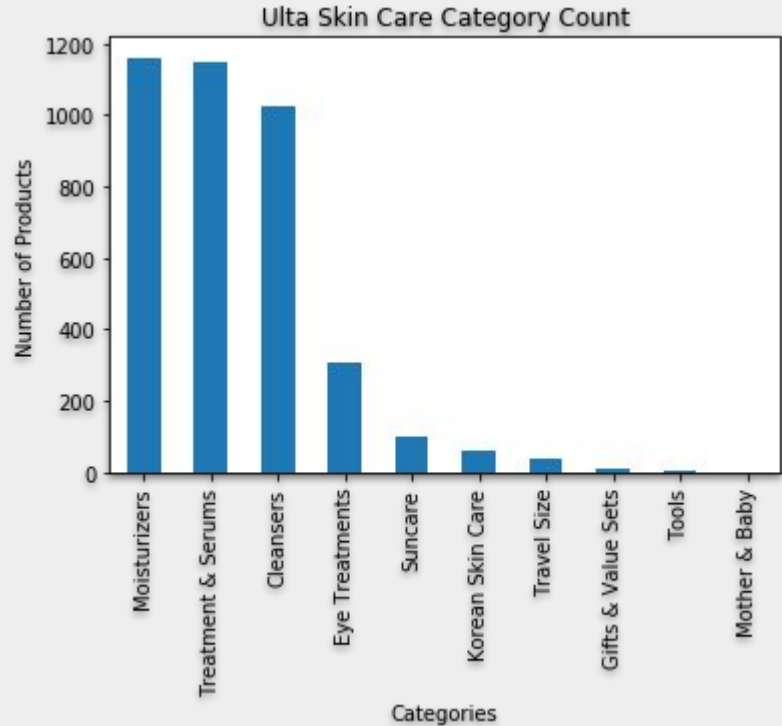
- **Low-Cost:** <15
- **Fair:** 15 - 35
- **Luxury:** 35+

Affordability Column

New categorical
column, affordability

Category Count

- Ulta carries more Moisturizer products, followed by Treatment & Serums and Cleansers. These make up the top 3 categories Ulta inventories.
- They carry some Eye Treatments and Suncare products, along with other miscellaneous products.



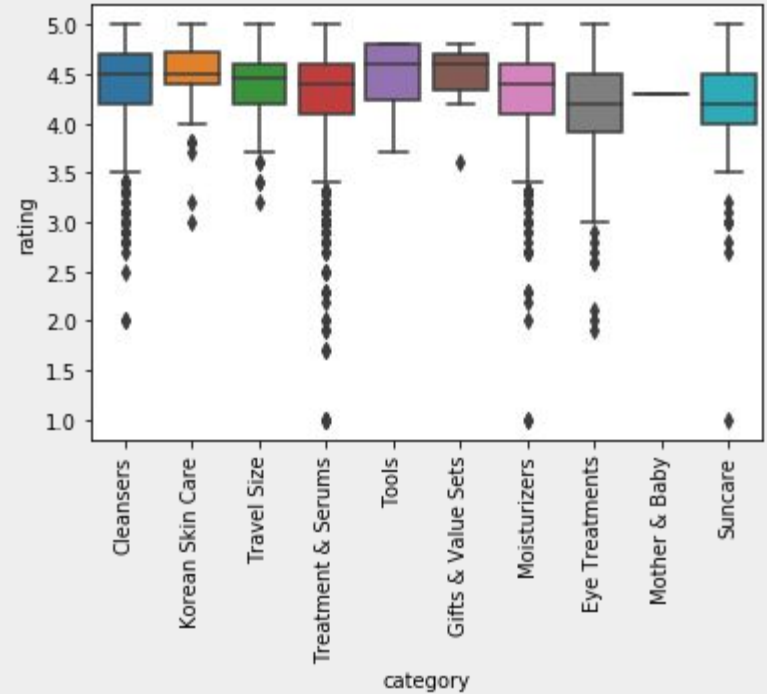
Category Reviews

- Since Moisturizers contain the most product count, they also have the most number of reviews.
- Moisturizers, on average, receive 300 reviews
- Cleansers contain more reviews than Treatment & Serums

	count	sum	mean
category			
Moisturizers	1123	337190.0	300.258237
Cleansers	974	262509.0	269.516427
Treatment & Serums	1071	189137.0	176.598506
Eye Treatments	294	53422.0	181.707483
Travel Size	36	30597.0	849.916667
Suncare	95	17592.0	185.178947
Korean Skin Care	56	7246.0	129.392857
Gifts & Value Sets	10	3060.0	306.000000
Tools	4	872.0	218.000000
Mother & Baby	1	155.0	155.000000

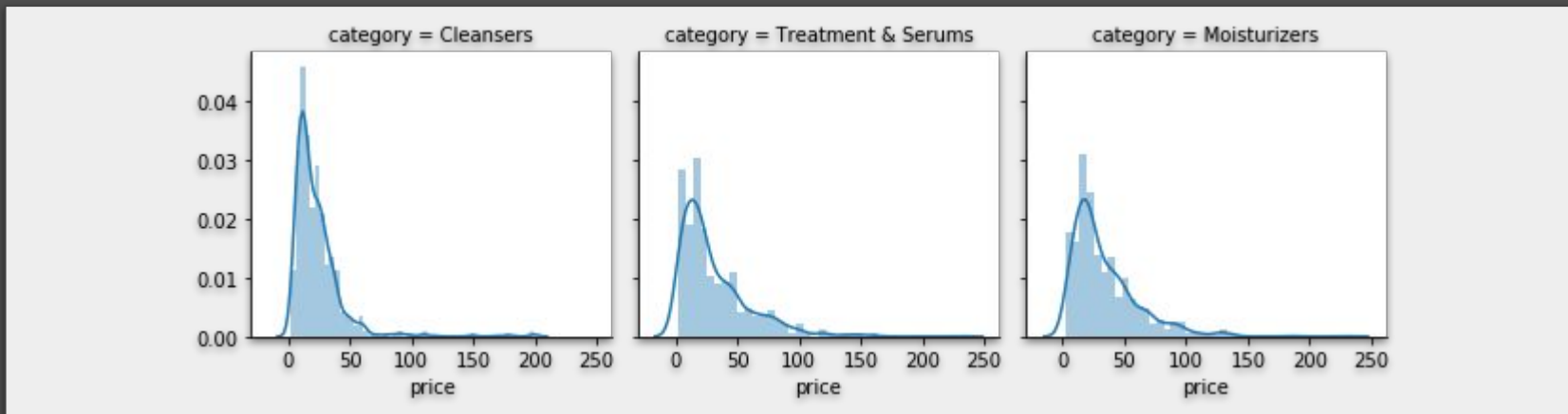
Category Ratings

- Most products in each category, on average, receive a 4.0 rating or higher.
- Of the 5 most inventoried categories, Suncare and Eye Treatments receive slightly lower ratings



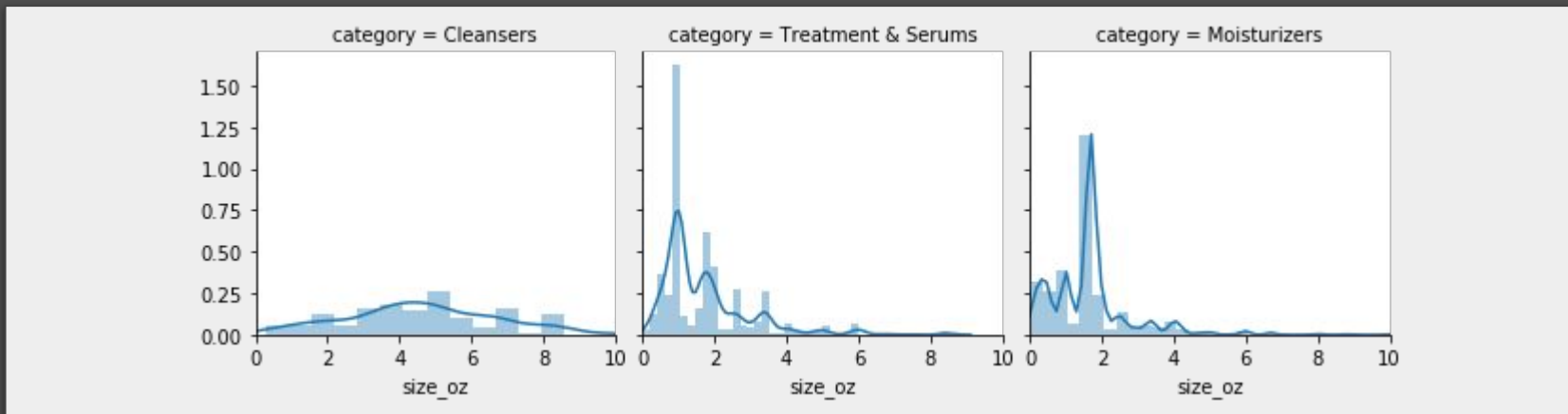
Compare Top 3 Categories:

Cleansers are **lower priced** than Treatment & Serums and Moisturizers, where it is skewed to the right.



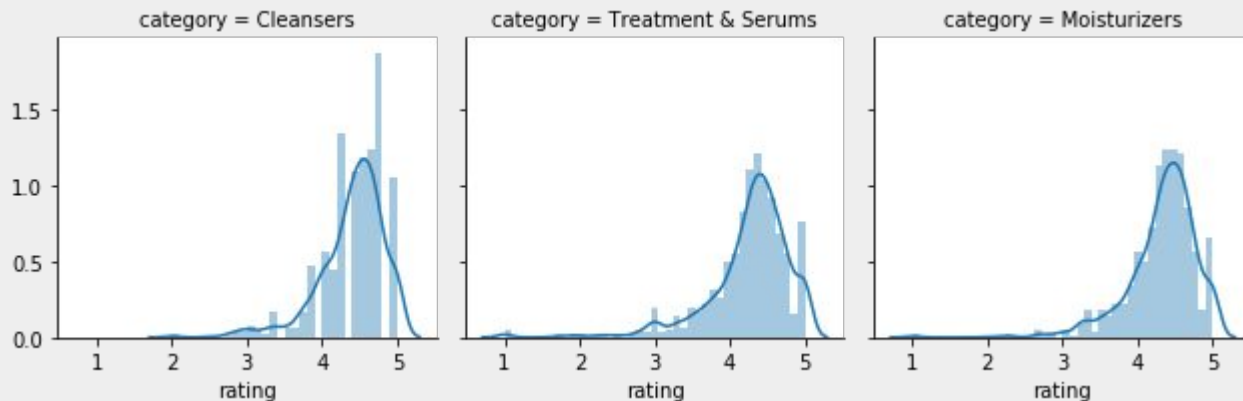
Compare Top 3 Categories:

Smaller quantity does not necessarily guarantee lower price. **Treatment & Serums** and **Moisturizers** tend to be packaged in **smaller quantities** (fluid oz) than cleansers, despite having a higher price distribution. Factors, such as ingredients, concentration, frequency of use, etc., may contribute to packaging.



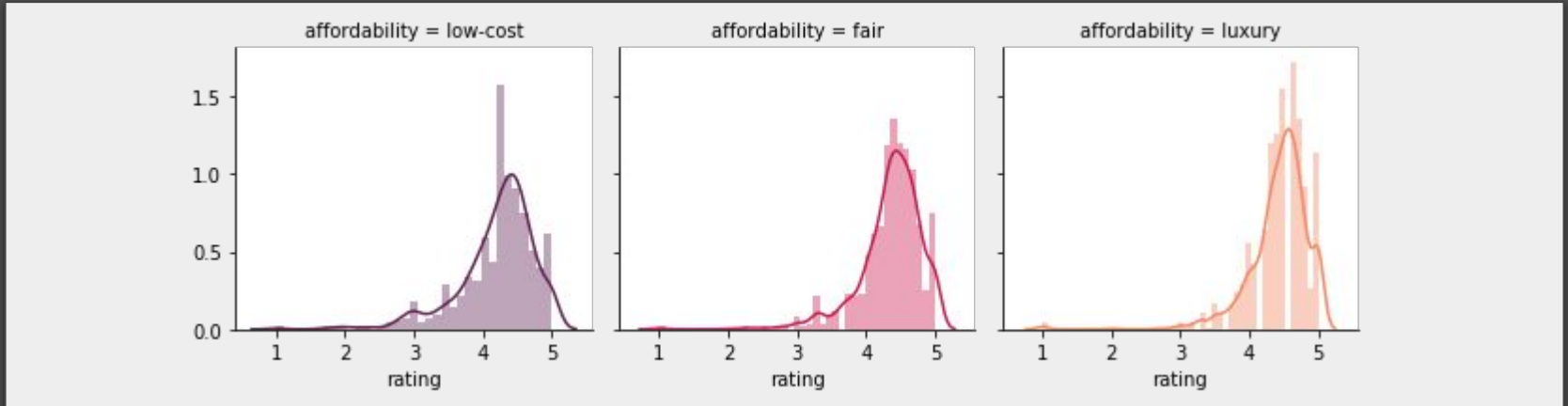
Compare Top 3 Categories:

Ratings are **similarly distributed above 4.0** between Cleansers, Treatment & Serums, and Moisturizers



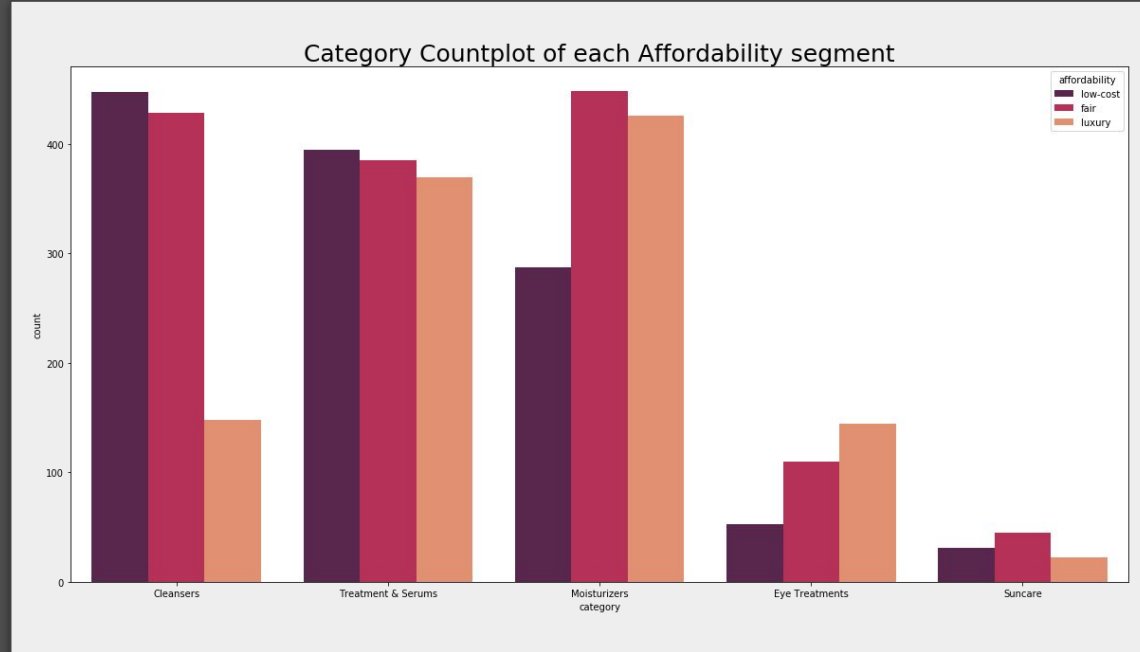
Affordability Ratings:

However, **luxury** product pricing are **rated higher** than low-cost and fairly-priced products



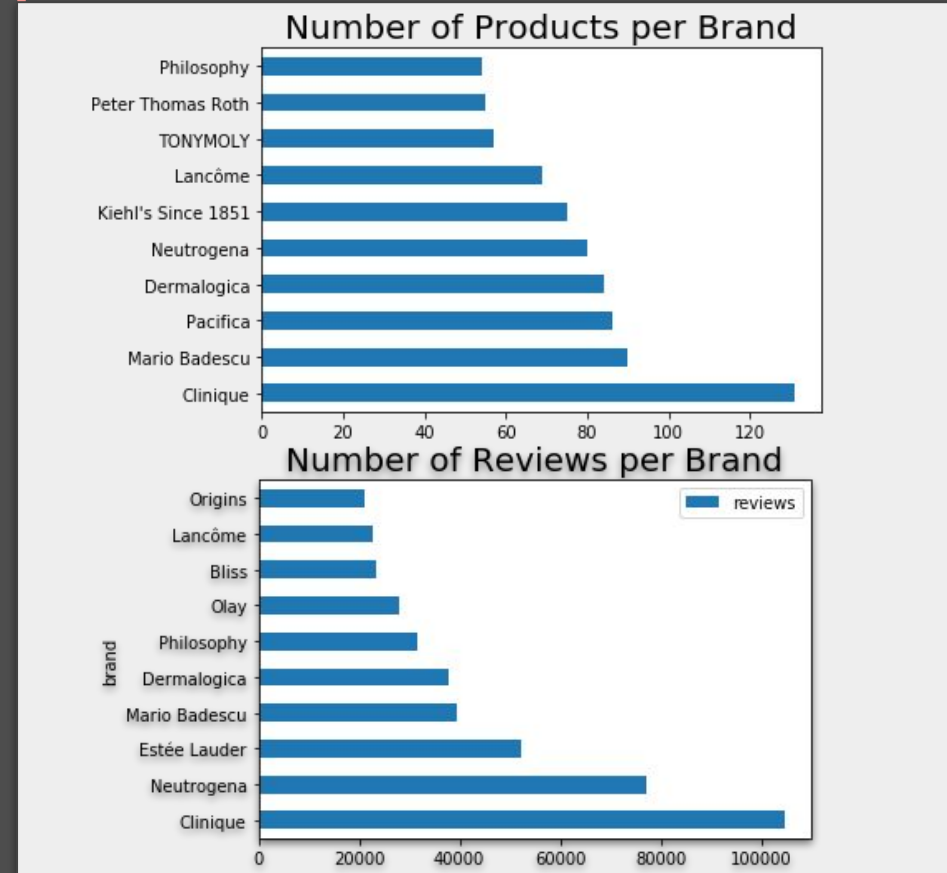
Affordability within each Category

- Cleansers are commonly priced at low-cost and fair values
- Treatments & Serums have almost equal amounts of luxury, fairly-priced, and low cost products
- Moisturizers consist are commonly priced at fair and luxury values
- Eye Treatments are commonly luxury products
- Suncare are commonly fairly-priced.

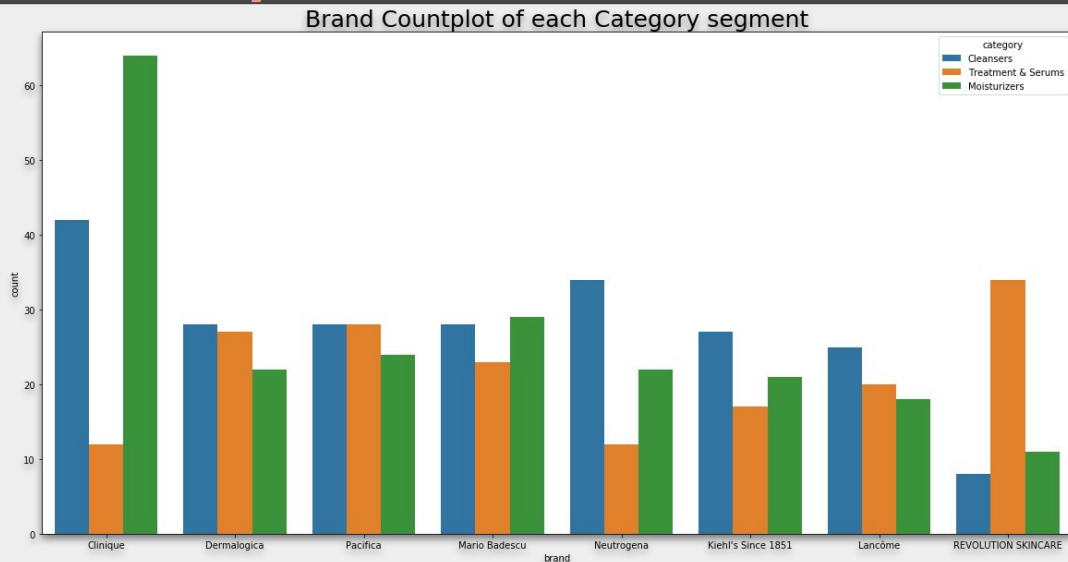


Top Inventory vs. Top Reviewed Brands

- Ulta contains the most **Clinique** products, followed by Mario Badescu and Pacifica
- **Clinique** has the **most reviews**, followed by Neutrogena and Estee Lauder
- Although Mario Badescu has more products, **Neutrogena** and **Estee Lauder** receive **more reviews**

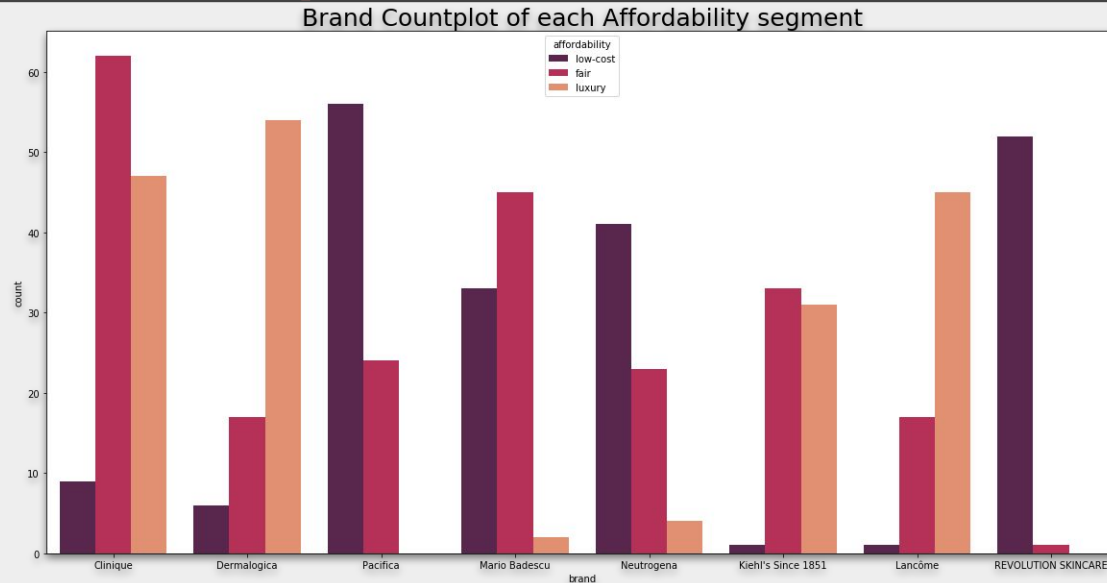


Top Inventory (Product-Count) Brands



- **Neutrogena** has notably **more Cleansers** in their catalogue
- **REVOLUTION SKINCARE** has notably **more Treatment & Serums** in their catalogue
- **Clinique** has notably **more Moisturizers** in their catalogue
- All other brands have slightly similar distribution across each category

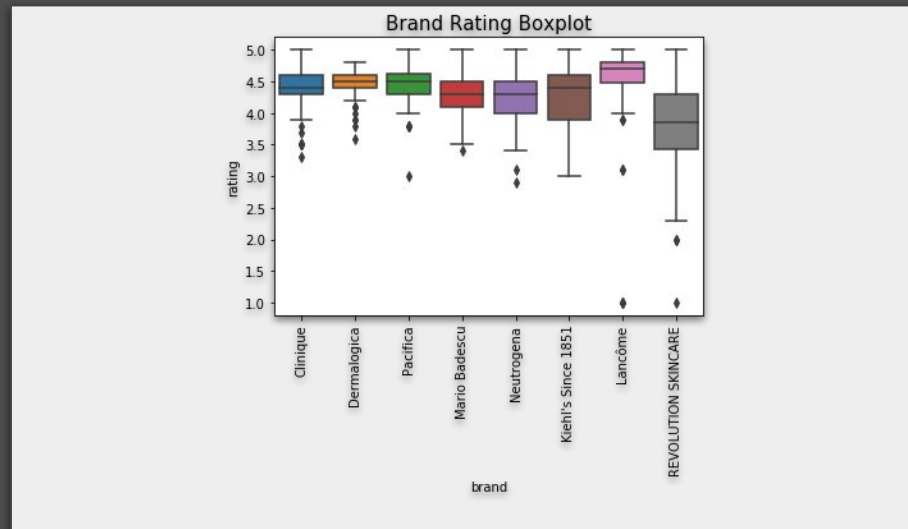
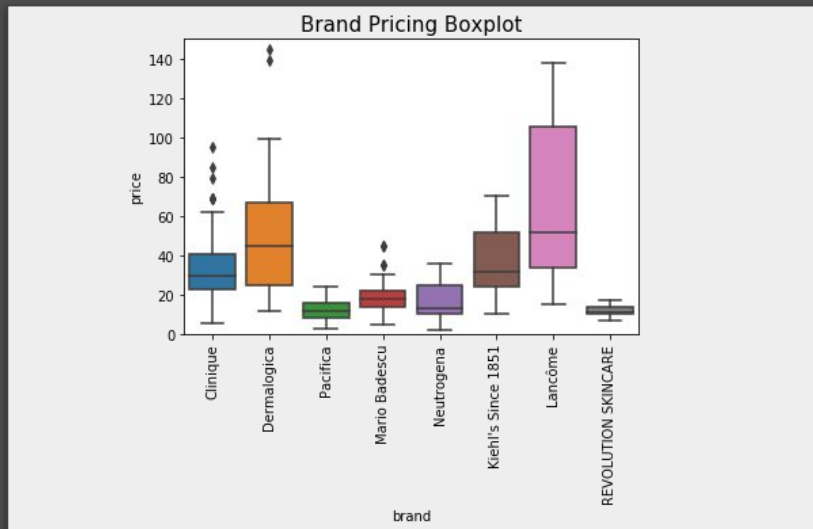
Top Inventory (Product-Count) Brands



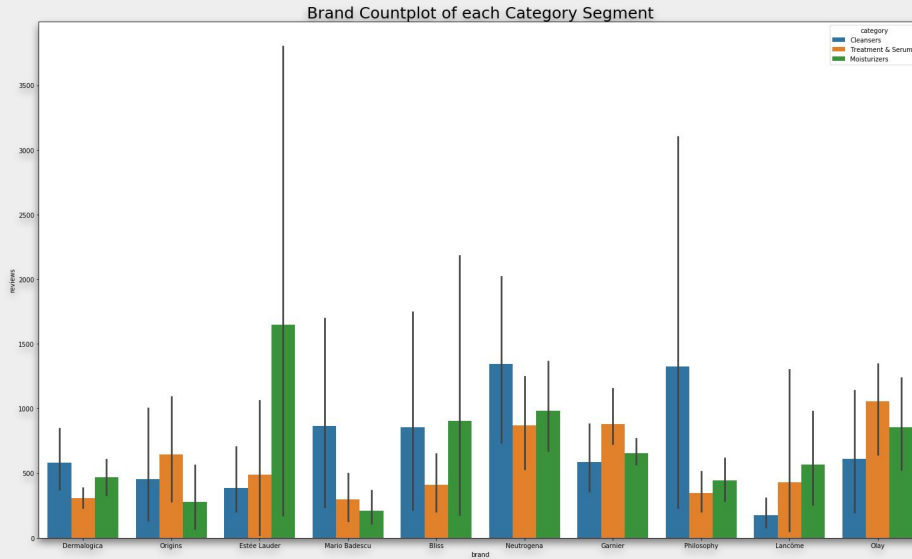
- Low-Cost Products: Pacifica, Neutrogena, REVOLUTION SKINCARE
- Fairly Priced Products: Clinique, Mario Badescu, Kiehl's Since 1851
- Luxury Products: Dermalogica, Lancome

Top Inventory (Product-Count) Brands

- Despite having more expensive products, Lancome maintains a higher average rating.
- The top inventoried brands are rated similarly, with the exception of REVOLUTION SKINCARE and Lancome.

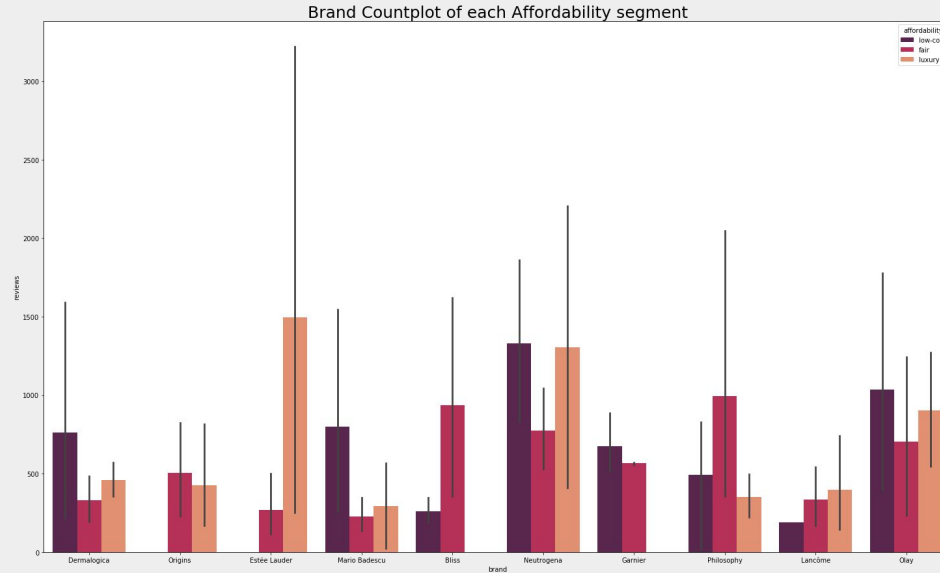


Top Reviewed Brands



- The following brands receive more **Cleanser** reviews: Neutrogena, Philosophy
- The following brands receive more **Treatment & Serum** reviews: Origins, Garnier, Olay
- The following brands receive more **Moisturizer** reviews: Estee Lauder

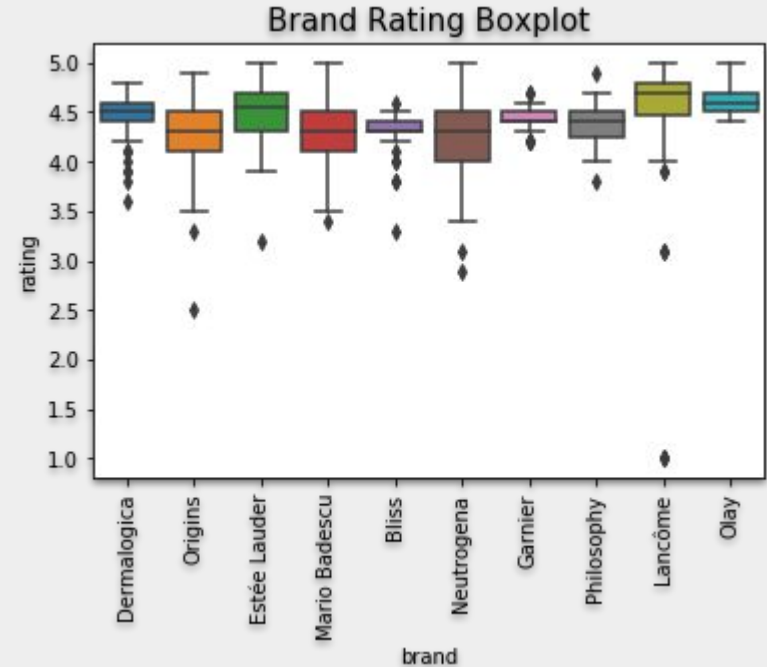
Top Reviewed Brands



- The following brands receive more **Low-cost** reviews: Neutrogena (followed closely with Luxury), Olay
- The following brands receive more **Fair** reviews: Bliss, Philosophy
- The following brands receive more **Luxury** reviews: Estee Lauder

Top Reviewed Brands

The brands with the highest reviews have similar average rating



Summary ~

	Cleansers	Treatment & Serums	Moisturizers
Most Reviews	Neutrogena, Philosophy	Olay	Estee Lauder
Most in Catalogue	Clinique, Neutrogena	REVOLUTION SKINCARE	Clinique
Affordability	Low, Fair	Low, Fair, Luxury	Fair, Luxury

Opportunities:

- **REVOLUTION SKINCARE** received the least amount of reviews and has the lowest rating, yet they inventory **~54 skin care** products
 - Consider why this brand received little attention among users and determine if holding inventory will remain profitable
- **Pacifica** received less than 500 reviews with **~86 skin care** products, but falls in the low price range and has ~4.5 average rating
- **Kiehl's Since 1851** contains **~75 skin care** products but only received less than 500 reviews
 - Pricing range is slightly higher than some brands like Neutrogena, which is priced lower and has more reviews
 - Consider why this brand received little attention among users and determine if holding inventory will remain profitable

Future Work:

- Use Selenium to scrape more product information: Best Uses, Pros, Cons
- Gather more review information: review, location of reviewer, **describe yourself**, submission date, bottom line recommendation
- Parse details section for **ingredients**



Thank You!

CONTACT

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