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# SEPHORA & CUSTOMER BEHAVIOR

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# INTRODUCTION TO SEPHORA & DATASET

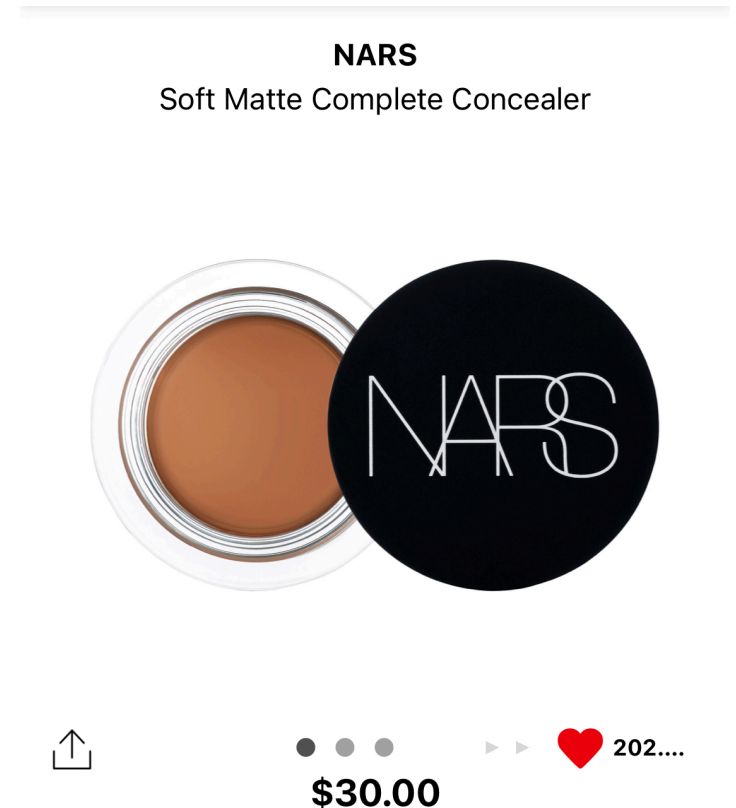
- Sephora is a prestige French retailer beauty products
  - Originally a perfume chain
  - Established in the US since 1998
  - “We Belong to Something Beautiful”
- Products range from makeup to even candles
  - Total of 9,168 products inside dataset
- [Dataset was collected by a Data Scientist](#)



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# CUSTOMERS & SEPHORA COMMUNITY

- Customers can browse and put a **heart** on a products
  - Customers can see the hearts
- Products are reviewed by customers online
  - Rating scale from 1.0 to 5.0 **stars**
  - 5.0 **stars** = Excellent



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# CUSTOMER BEHAVIOR AT SEPHORA

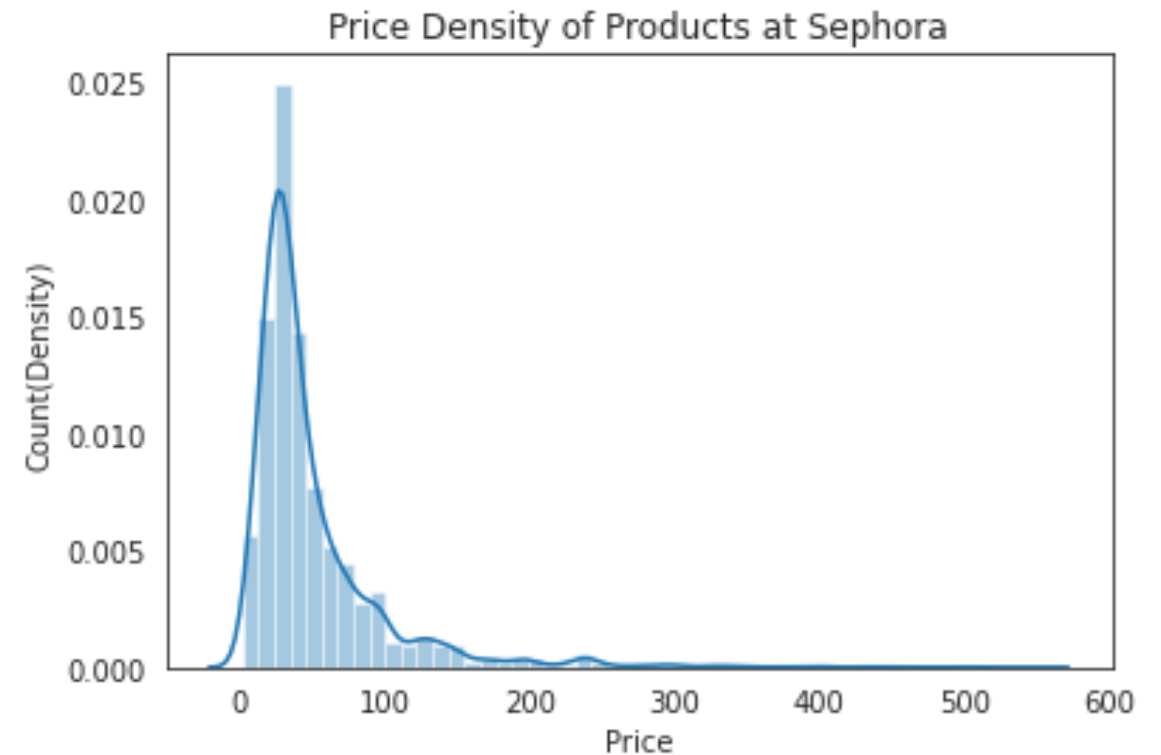
- How can customer behavior **influence** products at Sephora?
- Are customers purchasing **popular items** or **items they want**?
- With COVID-19, how has customer behavior changed?
  - Households are losing income but are customers still purchasing high end **products**?
- Should Sephora **continue** to sell fragrance/perfume products as customer behavior changes?



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# AVERAGE PRODUCT PRICES

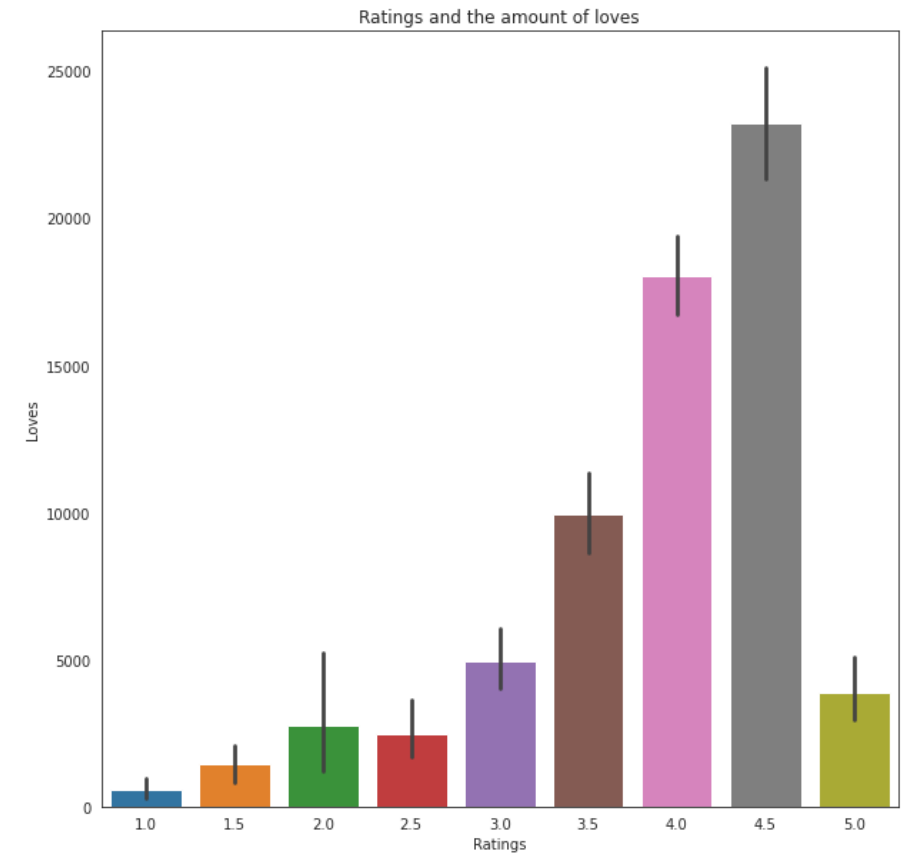
- On average, products at Sephora are \$50
- There are outliers
  - Some products might be  $\leq$  \$20
  - A few products are  $>$  \$200



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# RATINGS & LOVES

- Products were grouped based on their rating
- Based on the chart:
  - Products with a rating of 4.5 stars have a large amount of loves when combined
  - Ratings average between 3.0 to 4.5 stars



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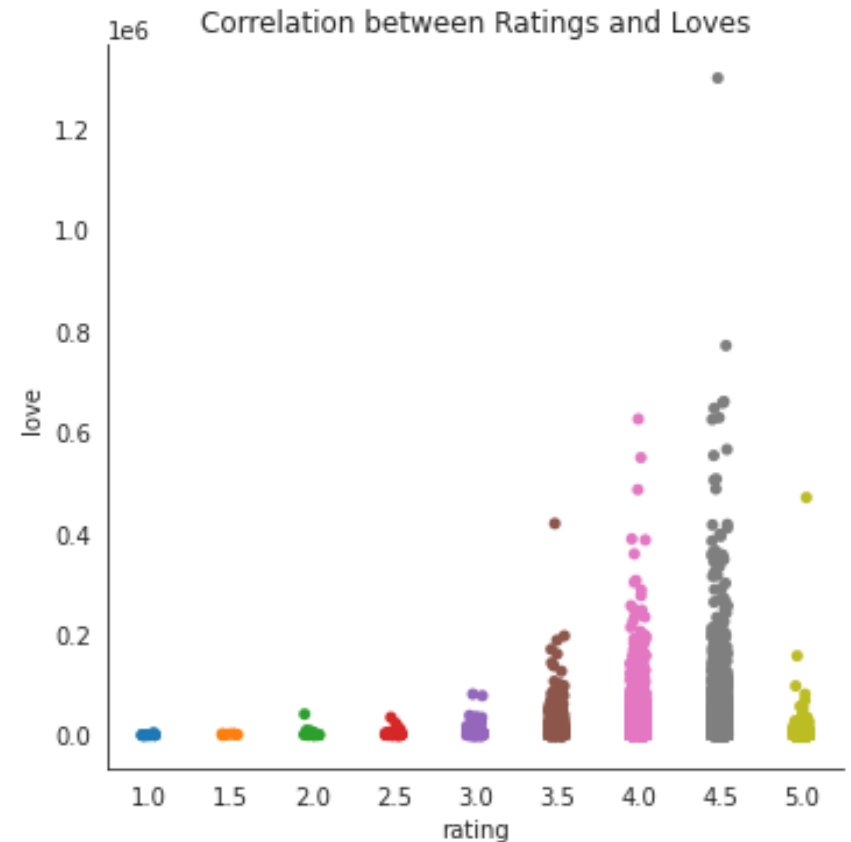
# HYPOTHESES ON CUSTOMER BEHAVIOR

- #1: I hypothesize that there is a **correlation** between products with **higher ratings** and the **amount of loves** received from customers
  - #2: I hypothesize that items priced lower or equal to \$50 are **rated higher** than products over \$50
  - #3: I hypothesize that there are **more loves** for makeup products for the face versus fragrance products
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# CORRELATION BETWEEN RATINGS & LOVES

- Is there a correlation between products with higher ratings and the amount of loves received from customers?
  - Yes, positive correlation!
  - Products with higher ratings (>3.5 stars) have received more loves
  - Measured with a Pearson R test

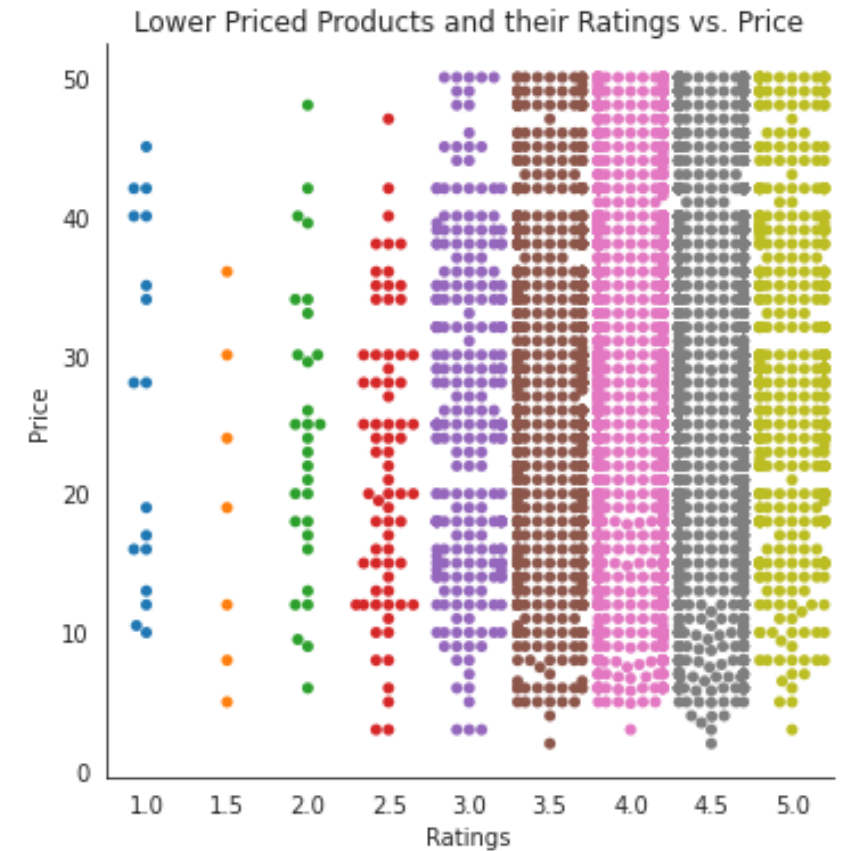




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# LOWER PRICED VS. HIGHER PRICED

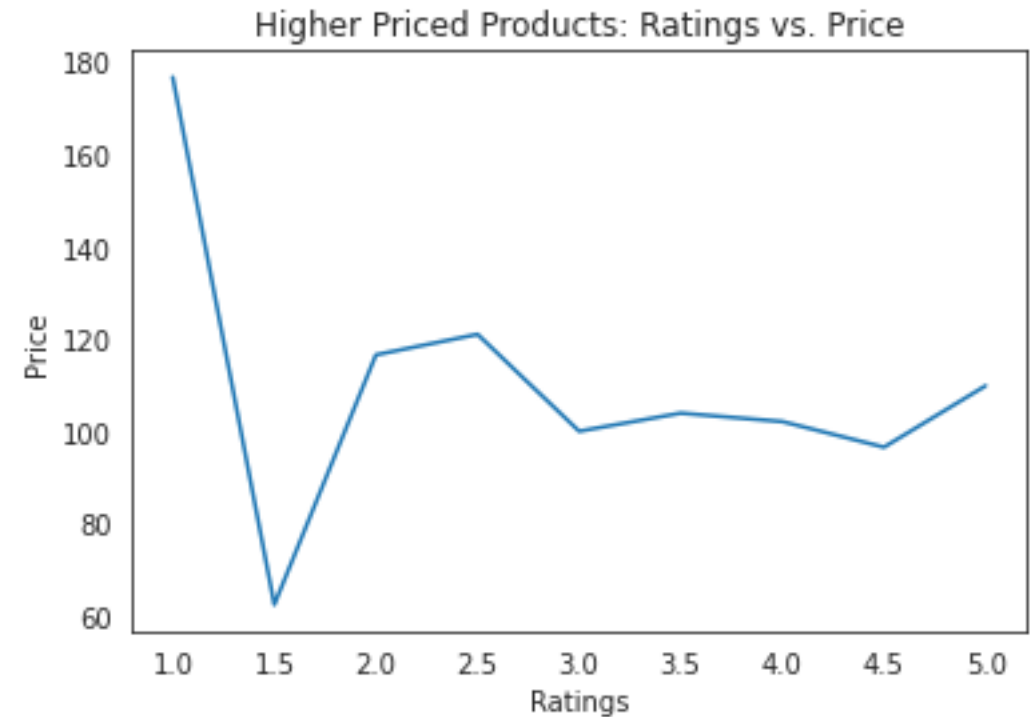
- Are customers rating products (<\$50) higher since they are affordable?
  - COVID 19 and Sales
  - \$49.80 is the average price
- Lower Priced Products
  - Less than or equal to \$50
  - 6,084 products
  - 82% are rated 4.0 or higher
  - The average rating is 4.1 stars



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# LOWER PRICED VS. HIGHER PRICED

- Higher Priced Products
  - Equal to or higher than \$50
  - 86% are rated 4.0 or higher
  - The average rating is 4.25 stars
- With a t-test, there is a statistical difference
- The hypothesis is false
  - Higher priced products are rated higher!



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# FRAGRANCE VS. MAKEUP FOR THE FACE

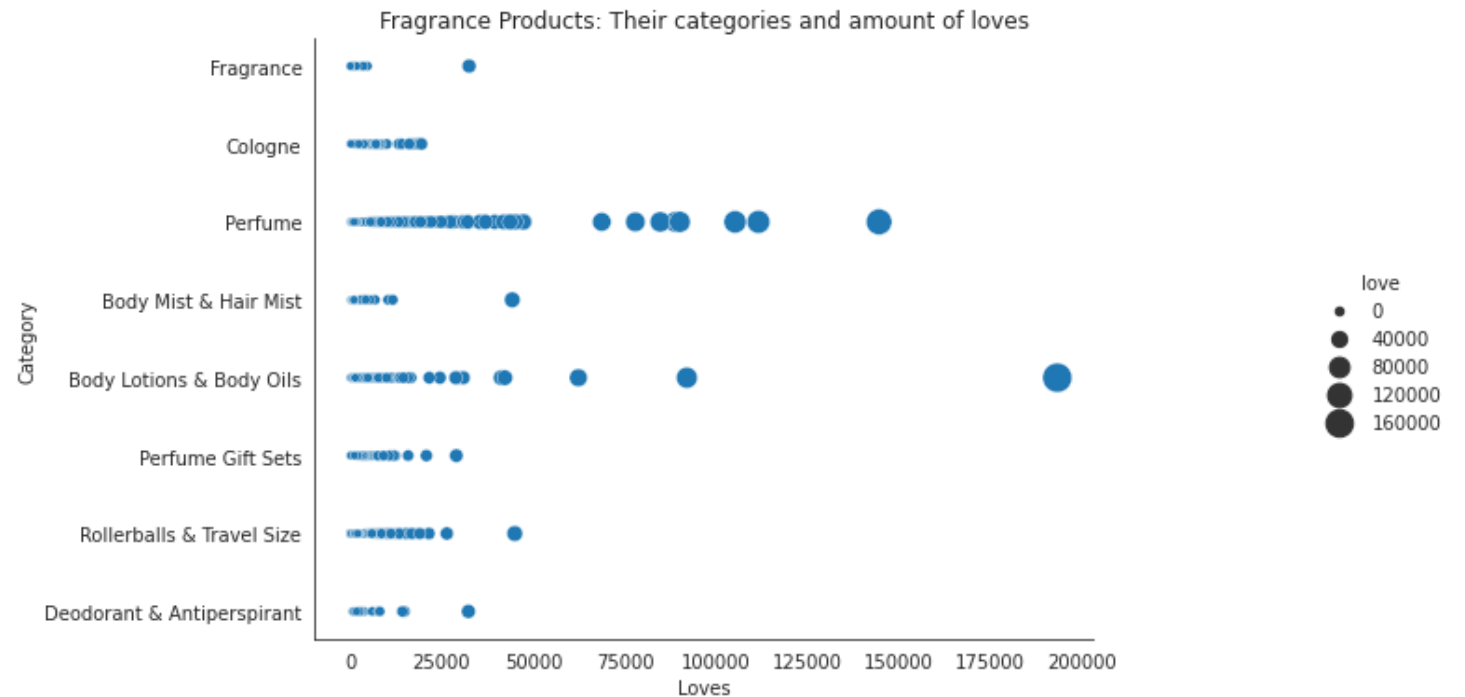
- The beauty industry is evolving
  - Youtubers and Influencers influence popularity and sales
    - Is it affecting makeup sales?
- Do makeup products for the face receive more **loves** than fragrance products?
- Products were divided into 2 categories
  - Lip and eye products not included



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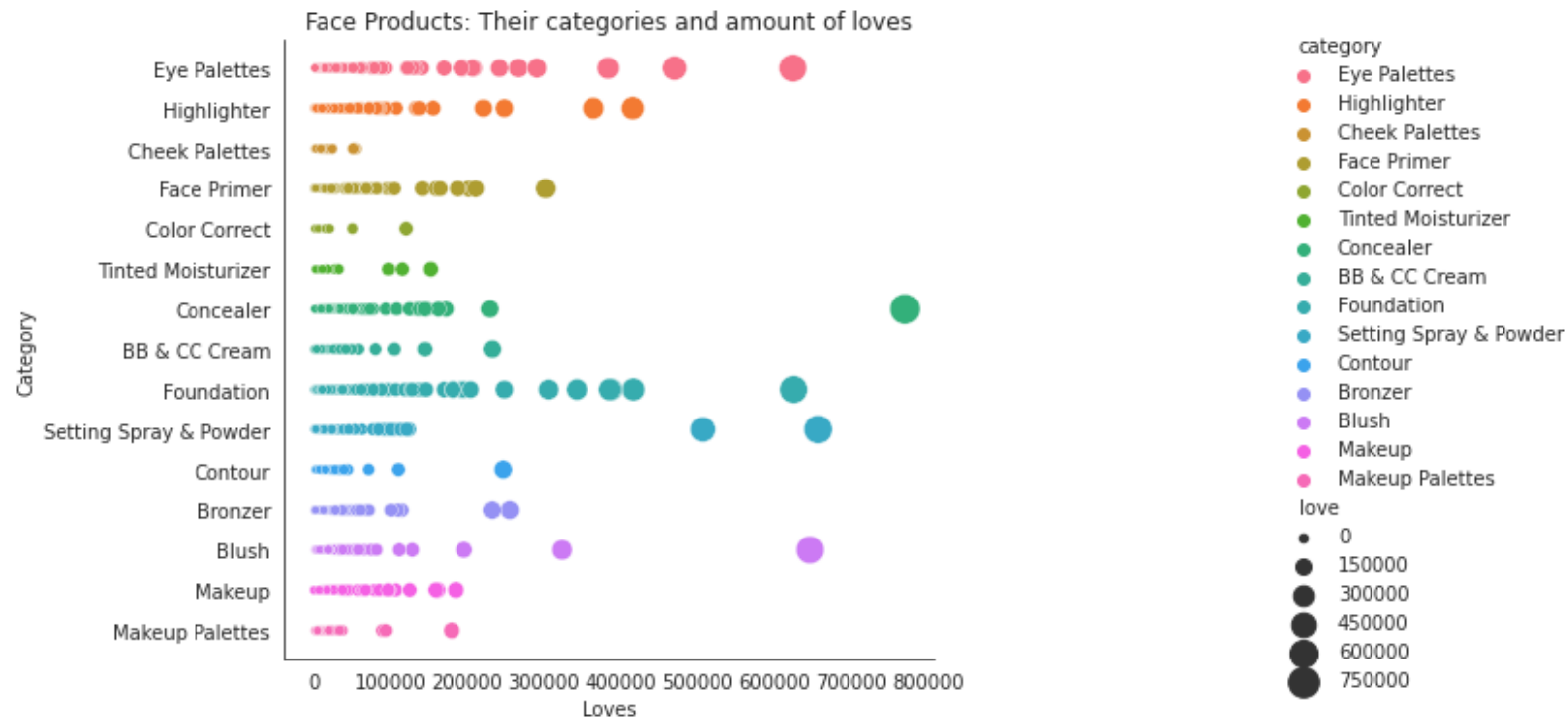
# FRAGRANCE VS. MAKEUP FOR THE FACE

- Fragrance includes 10 categories
  - 1297 products
- Average amount of loves
  - 5,816 hearts



# FRAGRANCE VS. MAKEUP FOR THE FACE

- Makeup includes 15 categories
  - 1226 products
- Average amount of loves
  - 37,246 hearts
- There is a statistical significance between fragrance and face
  - Accept the hypothesis!



## IN CONCLUSION,

- Sephora has a robust community with interactive customers
- Sephora can see what products are popular and rated highly
- Findings
  - Positive correlation between loves and rating
  - Higher priced products are rated higher
  - Makeup products are popular



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# NEXT STEPS

- **Expand** to include lip products with makeup products
  - **Expand** to investigate popularity of skincare versus fragrance
  - **Expand** to investigate the profit margin between makeup, skincare & fragrance
    - Should Sephora look more into removing fragrance items?
  - Conduct customer surveys on product prices during COVID-19
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# ANY QUESTIONS?

