

SEPHORA

PRESENTED BY: TOSCA LE



# Recommending Skincare



Helping customers  
find their essentials.

# Outline



## TOPICS COVERED

- Business Problem
- Today's Skincare
- Recommendation Systems
- Data and Methods
- Results/Example
- Conclusions/Next Steps





# Business Problem



How to help new customers find products they might like on Sephora?



How can we recommend customers skincare products for their needs?



How can we improve and personalize customers' shopping experience?

# Today's Skincare

HOW HAS THE SKINCARE INDUSTRY CHANGED?

- An oversaturated industry
- Shifting demand of consumers
- Consumer confusion



# Recommendation Systems



WHAT'S  
YOUR  
SKIN  
TYPE?

WHAT  
ARE YOU  
LOOKING  
FOR?

TRY THIS!

**PERSONALIZED RECOMMENDATIONS:  
COLLABORATIVE FILTERING VS. CONTENT-BASED**



# Data & Methods

→  
**Current dataset includes over 8000 entries of user and product data.**

**Product features range from price, ingredients and type of skincare. User features include skin type, skin tone, etc.**

**Iterative process through different models to build recommendations based off evaluation metric (RMSE).**



# Results: Best Model



- KNN Baseline
  - Uses rating data to compute similarity between items and then gets the top recommendations based on a similarity metric, pearson correlation
- RMSE = 1.17

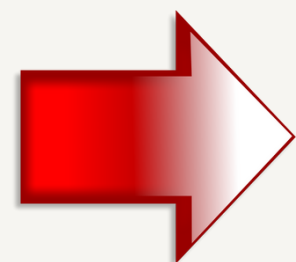


# Example:



## LET'S SEE SOME RECOMMENDATIONS!

Customer w/  
oily skin  
looking for  
moisturizers



```
Enter ID: 999

                                Product    Brand  Price  \
2231  Dr. Andrew Weil For Origins™ Mega-Bright SPF 3... ORIGINS    56

                                Product_Url
2231  https://www.sephora.com/product/dr-andrew-weil...
How do you rate this product on a scale of 1-5, press n if you have not used this before:
2

                                Product    Brand  Price  \
2636  Argan Cleansing Oil  JOSIE MARAN    32

                                Product_Url
2636  https://www.sephora.com/product/argan-cleansin...
How do you rate this product on a scale of 1-5, press n if you have not used this before:
4
Estimating biases using als...
Computing the pearson similarity matrix...
Done computing similarity matrix.
How many products would you like to be recommended to you?
3
Recommendation # 1 :  3000    Vine[activ] Overnight Detox Oil
Name: Product, dtype: object

Recommendation # 2 :  2520    Daily Reviving Concentrate
Name: Product, dtype: object

Recommendation # 3 :  6884    POWER Recharging Night Pressed Serum
Name: Product, dtype: object
```



# Conclusions



- Successfully recommend a desired number of products based on customer input/needs for Sephora customers
- We can help new customers have a personalized shopping experience
- This recommender can continually be improved as we gather more data
- There is not one perfect way to build a recommendation system



# Thank you!

FOR QUESTIONS, COMMENTS, AND INQUIRIES:

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# Sources

- Images:
  - [Canva Templates](#)
  - [https://media.istockphoto.com/photos/sephora-cosmetics-chain-in-french-city-with-sparkling-light-picture-id637170098?k=20&m=637170098&s=612x612&w=0&h=XJqBZoY29VMbpI527oN6Rl1kWmA6fsvLPOBiS7IqT\\_s=](https://media.istockphoto.com/photos/sephora-cosmetics-chain-in-french-city-with-sparkling-light-picture-id637170098?k=20&m=637170098&s=612x612&w=0&h=XJqBZoY29VMbpI527oN6Rl1kWmA6fsvLPOBiS7IqT_s=)
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- Resources:
  - <https://www.businessinsider.com/cosmetics-industry-struggles-to-keep-up-in-age-of-glossier-2019-8>
  - <https://www.sinless-skincare.ch/blogs/blog/big-beauty-and-consumer-burnout>