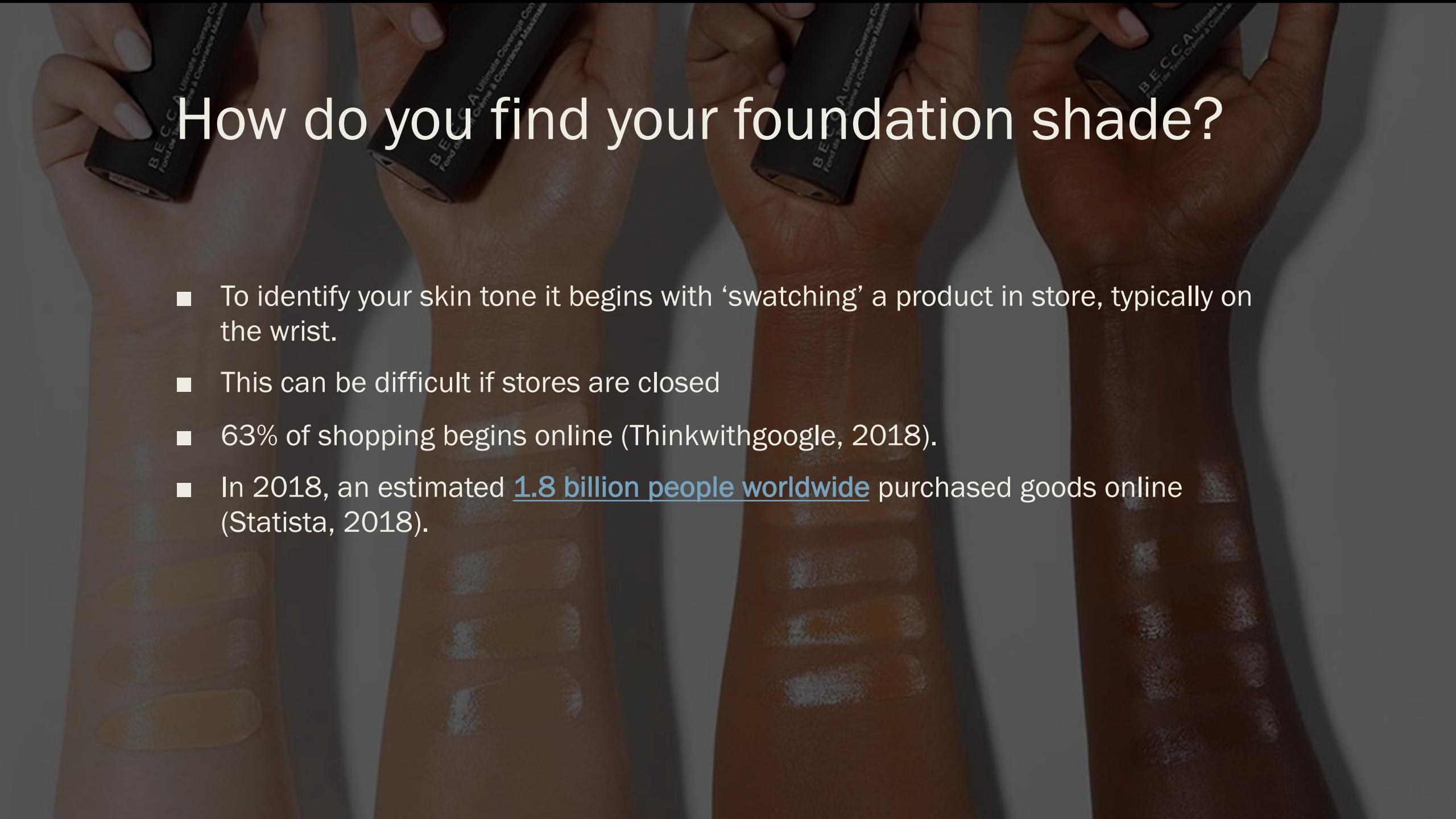


WHAT'S YOUR SHADE?



Asia Roy
Data Scientist

A close-up photograph of a woman's right forearm and hand. Four different shades of foundation are applied in horizontal swatches across the back of her wrist. From left to right, the shades range from a light beige to a dark brown. Each swatch is approximately 1 cm wide and 2 cm long. The woman has light-colored nail polish on her fingernails. The background is a plain, light color.

How do you find your foundation shade?

- To identify your skin tone it begins with ‘swatching’ a product in store, typically on the wrist.
- This can be difficult if stores are closed
- 63% of shopping begins online (Thinkwithgoogle, 2018).
- In 2018, an estimated 1.8 billion people worldwide purchased goods online (Statista, 2018).

Curious to know, what brand and shade of foundation is ideal for your skin tone?

Using a phone or computer camera, take a picture of your face.

This technology will recommend your closest foundation match, using make-up brands found at Sephora and Ulta.

We Cater to All Skin Tones.

Using Artificial Intelligence to Find Your Foundation

The Data

- Using a dataset found online of over 6,000 Foundations sold at Sephora and Ulta (top U.S. retailers)
- The corresponding HEX values were found using Adobe Lightroom
- Converted HEX values to RGB
ie. Hex = #EFCBA4 = RGB (239, 203, 164)

Extracting Skin Tone

- Difficulty with finding correct min and max threshold to identify skin color of darker skin tones
- Applied a skin mask using Gaussian distribution in Open CV library, which converted everything not indicative of skin tone black
- Finding the dominant color using K-Means Clustering Algorithm.
Number of clusters = 5



Finding The Perfect Shade

Choosing the cluster
with the highest color
percentage and lowest
change to centroids

Color Bar



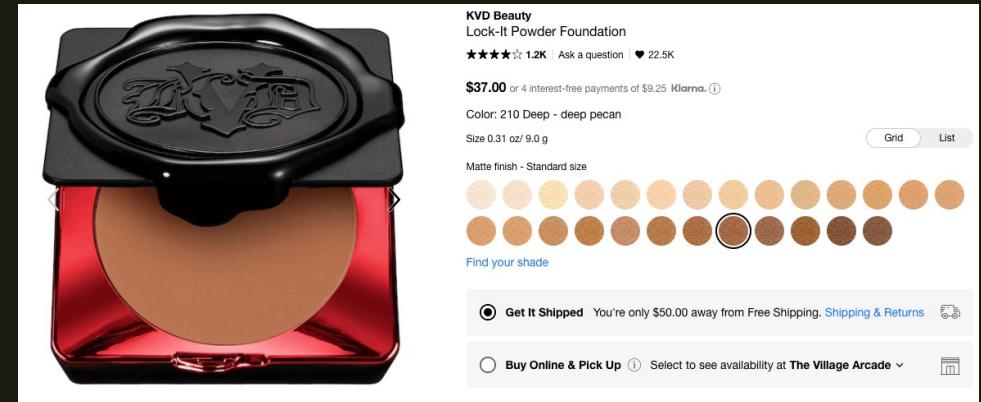
RECOMMENDING THE CLOSEST MATCH

Using Transfer learning, the k-means clustering labels are input into the recommender system, comparing the distances using cosine similarity

Cosine
Similarities



	red	green	blue	similarities
Foundation				
KVD Vegan Beauty Lock-It Powder Foundation Refills 210	163	98	68	0.999994





CONTINUE BUILDING
OUT FLASK APPLICATION



INCREASE SAMPLE SIZE

Next Steps