

*What
characteristics
make K-beauty
unique compared to
American skincare?*

*An analysis on Skincare and what
makes K-beauty unique.*



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r/SkincareAddiction vs r/KoreanSkincare



[Routine Help] Do I add to my routine? Any moisturiser recommendations for normal skin?

Routine Help

I have normal skin type and currently use a cleanser, serum, moisturiser and a lip mask (at night). I also take collagen gummies every day.

My skin feels good, it is smooth and soft, barring a few small bumps here and there. Do I try to add anything to my routine? Or do I just chill, as my skin is doing well? I was thinking of getting a night specific moisturiser or getting a toner, but I am not sure.

Cleansing oil recos?

I have normal skin type. I bought the skin1004 and dokdo cleanser. The skin1004 one didn't really work for me and broke me out whilst I'm still observing the dokdo cleansing oil cos I just kinda bought it but I think it gives me redness while I was cleansing my face. So if you guys have a really good cleansing oil to recommend, I would really appreciate it! <3

[Sun Care] How close do you apply sunscreen to your eyes?

Sun Care

Stupid question, but I've been wondering it. On the eyelids and right underneath the eyes? Any brands that don't sting your eyes

[Anti-Aging] What do you wish you would've done earlier that could've prevented or slowed down aging skin?

Anti Aging

I know it's a normal part of getting older but who wouldn't want to prevent it? What do you wish you did that could've helped prevent it or slow it down?



- Sample total of 2014 posts collected between April 10-13th 2024.
- Used New, Top and Rising posts (450 from each).
- Used for loop.



Data Collection & Cleaning



- Obtaining specific data.
- Duplicates (3130 ---> 2014 posts).
- Null rows, Line breaks, punctuations, characters etc.

Exploratory Data Analysis

Tokenization + Lemmatization

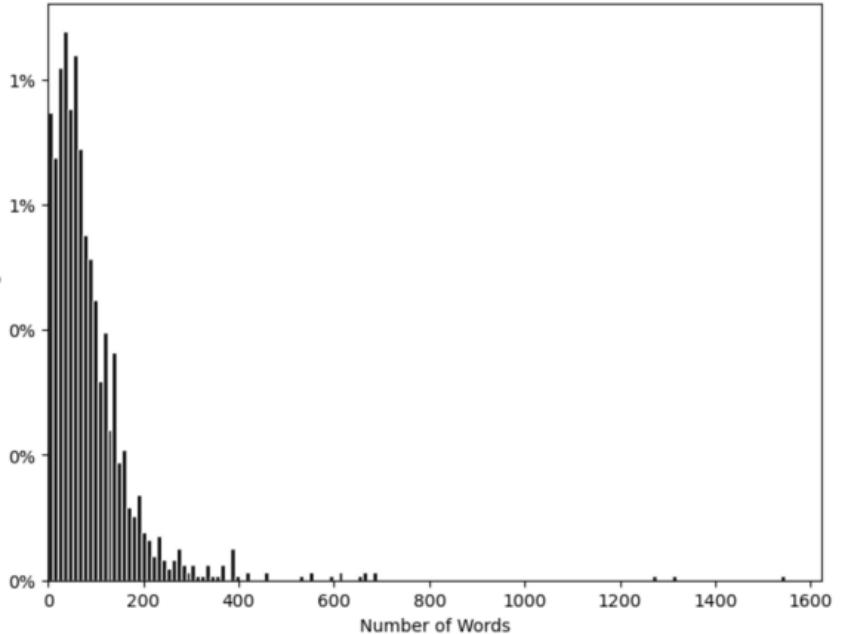


Tokenization

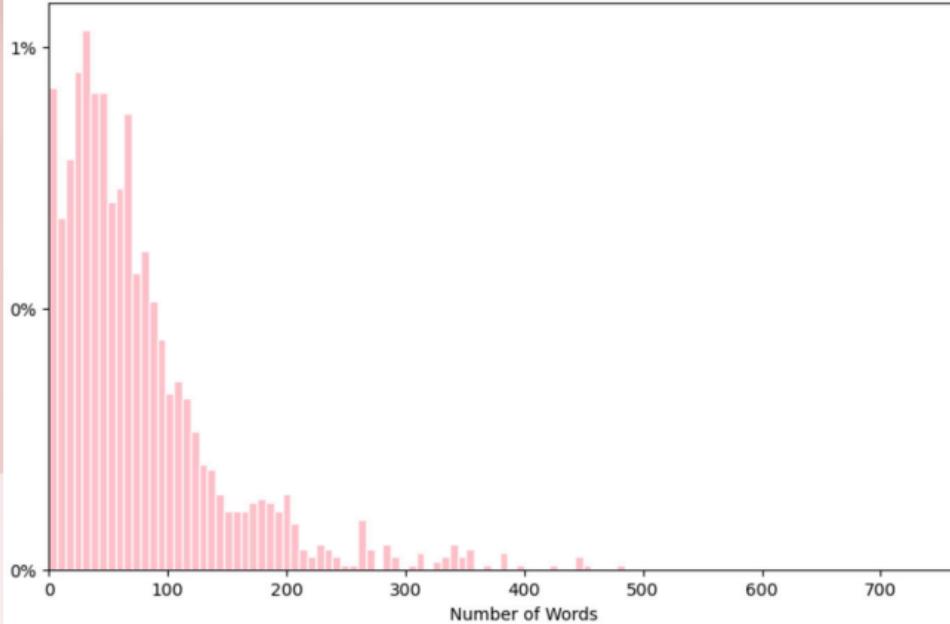


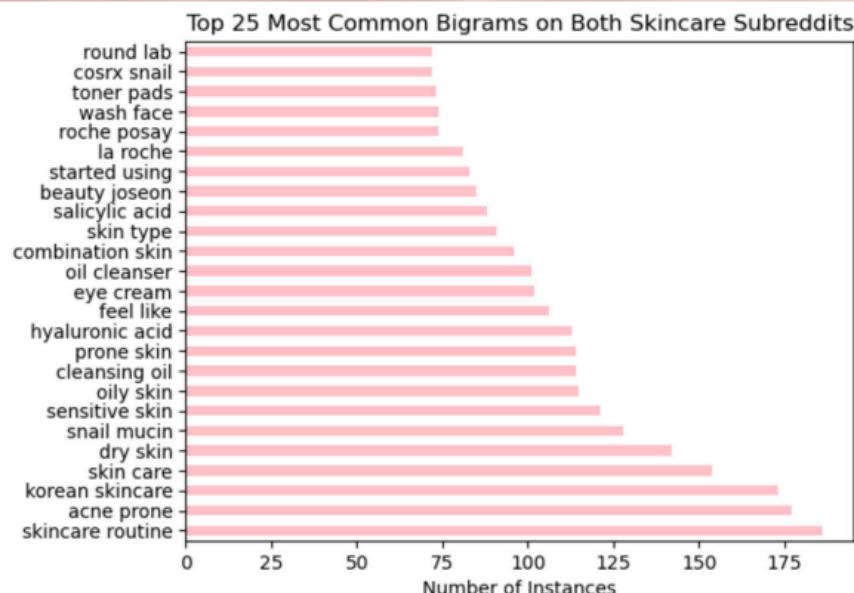
Post Lengths

Distribution of Post Length in Skincare Addiction Subreddit



Distribution of Post Lengths in Korean Skincare Subreddit

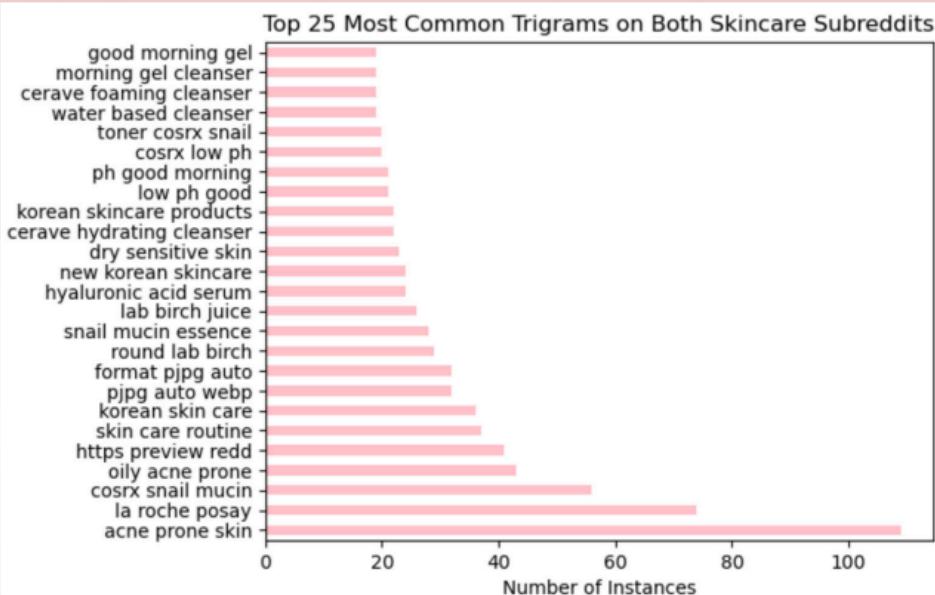




Top written about
Ingredients include
Snail Mucin, Cleansing
oil, Hyaluronic Acid and
Salicylic Acid.

Top written about
Brands include Beauty
of Joseon, La Roche
Posay, and cosrx.

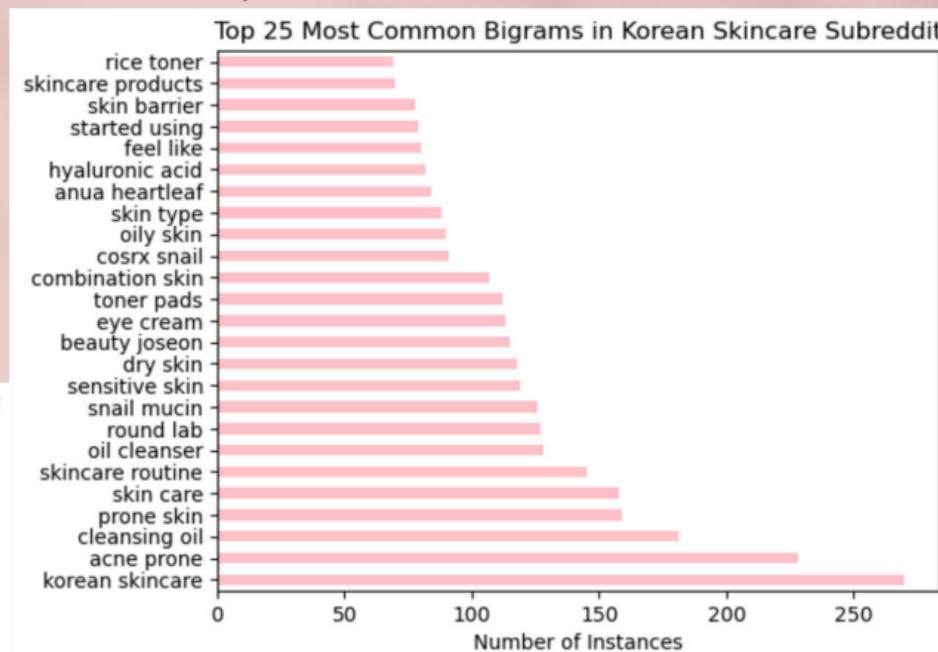
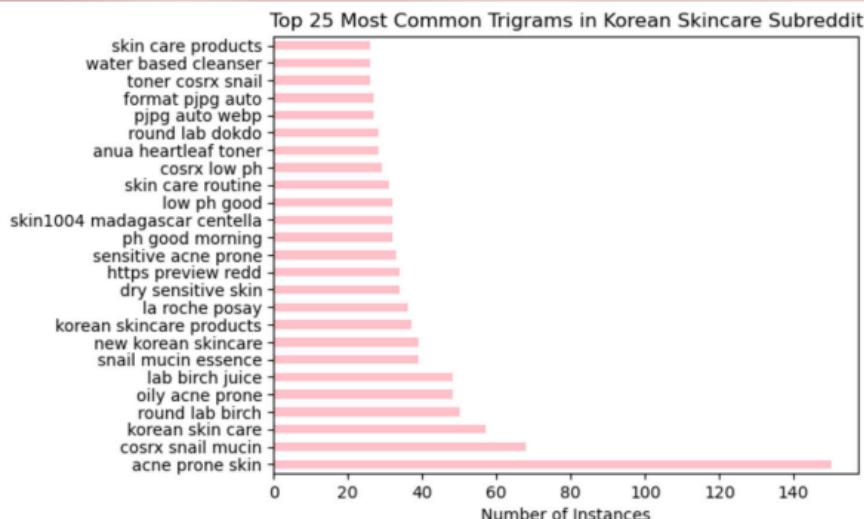
Top written about skin concerns include
Acne Prone, Dry Skin, Sensitive skin, Oily
Acne Prone and Prone skin in general.



Korean Skincare (analysis continued)

Top written about products include cosrx snail mucin, Lab birch juice, La Roche Posay, skin1004 madagascar centella

Top written about skin concerns include acne, oily acne prone, dry sensitive skin, sensitive acne prone, skin care routine



Unique words only seen in the Korean skincare subreddit include, water based cleanser, rice toner, anua heartleaf, snail mucin essence, skin barrier, and "started using".

Best model:

Multinomial model Naive Bayes, with default parameters

Class	Precision	Recall	F1-Score	Support
skincare_Addiction	0.78	0.72	0.75	241
koreanskincare	0.76	0.81	0.78	263
accuracy			0.77	504
macro avg	0.77	0.77	0.77	504
weighted avg	0.77	0.77	0.77	504

Best Score: 77%

Train score: 91%

Test Score: 77%

Baseline accuracy score: ~50%*

Model 2:

Logistic Regression model with TFIDF

Best score:

Best Params:

cvect__max_df	0.75
cvect__min_df	1
cvect__ngram_range	(1, 2)
log_reg__C	1
log_reg__penalty	'l2'

class	precision	recall	f1-score	support
skincare_addiction	0.72180	0.79668	0.75740	241
koreanskincare	0.79412	0.71863	0.75449	263
accuracy			0.75595	504
macro avg	0.75796	0.75766	0.75594	504
weighted avg	0.75954	0.75595	0.75588	504

Train score: 0.89.8%

Test score: 0.75.59%

Predicted:

skincare_addiction	192	49
koreanskincare	74	189
	skincare_addiction	koreanskincare

Other Models attempted:

K-Nearest Neighbors Classifier and Random Forest Classifier.

Misclassification

Misclassified_Posts: 123
True Labels: 123
Predicted_Labels: 123

	Misclassified_Posts	True Labels	Predicted_Labels
433	not really related but i need some help on thi...	koreanskincare	Skincare_Addiction
678	Mini haul of what I got from OliveYoung :) gon...	koreanskincare	Skincare_Addiction
462	Are these red spots I have PIE (post inflammat...	koreanskincare	Skincare_Addiction
1395	Hello, I am a 28 female and currently using a ...	Skincare_Addiction	koreanskincare
774	My skin is mainly dry (between my brow area an...	koreanskincare	Skincare_Addiction
56	Hiya guys! I'm trying to find new recommendati...	koreanskincare	Skincare_Addiction
519	Recently, I had a decent sized pimple on my ch...	koreanskincare	Skincare_Addiction
1524	I have been using skincare products since I ca...	Skincare_Addiction	koreanskincare
1860	If it's not all 3, are there any that double a...	Skincare_Addiction	koreanskincare
1475	Do you prefer to use a cleansing balm or a cle...	Skincare_Addiction	koreanskincare
1053	Is essential beauty ok to use for a broke gurl?	Skincare_Addiction	koreanskincare
1085	Hi! I usually have discoloration when scarring...	Skincare_Addiction	koreanskincare
394	I've been on 100mg Spironolactone for a few we...	koreanskincare	Skincare_Addiction
923	Probably the best suncream I have used. I have...	koreanskincare	Skincare_Addiction
111	Hello!\n\nPlease can someone recommend some go...	koreanskincare	Skincare_Addiction
1652	Right when I started using Korean products, my...	Skincare_Addiction	koreanskincare
1245	Has anyone used this brand before? I'm mostly ...	Skincare_Addiction	koreanskincare
1405	Hey everyone! I want to try a double cleansing...	Skincare_Addiction	koreanskincare
1269	Hi everyone, pls share your favorite sunscreen...	Skincare_Addiction	koreanskincare
1061	Hello everyone! I am getting married soon and ...	Skincare_Addiction	koreanskincare
535	I placed an order in stylevana in January 12 a...	koreanskincare	Skincare_Addiction

Limitations and improvement

- Review more Korean Text
- Grid Search / Parameters
- Feature Engineering
- Sentiment Analysis

Conclusions / Recommendations

- Utilizing **multinomial Naive Bayes model, with default parameters** will best help classify K-beauty and American skincare
- What makes K-beauty different are many factors but main ones that stood out are **unique ingredients** such as rice and snail mucin and more use /discussion of **specific types of skin products** such as water based cleansers, toners etc.
- Implementing this can not only help differentiate between the American and K-beauty market, but can also be useful for future analysis!





Thank you!

Questions?