

AMAZON PRODUCT REVIEW

By Una Bayasgalan

Work Flow

01

EDA and Text Data Preprocess

NLTK, TextBlob, spaCy

02

Sentiment Analysis

Vader Sentiment Analysis

03

Topic Modeling

Latent Dirichlet Allocation
Count Vectorizer

04

Visualization

Python, pyLDAvis

Background

Understand what the product review reveals

What can companies do with the information

DATA



- 198414 – Unique reviews
- 12101 – Unique products

	reviewerID	asin	reviewerName	helpful	reviewText	overall	summary	unixReviewTime	reviewTime
0	A1YJEY40YUW4SE	7806397051	Andrea	[3, 4]	Very oily and creamy. Not at all what I expect...	1.0	Don't waste your money	1391040000	01 30, 2014
1	A60XNB876KYML	7806397051	Jessica H.	[1, 1]	This palette was a decent price and I was look...	3.0	OK Palette!	1397779200	04 18, 2014
2	A3G6XNM240RMWA	7806397051	Karen	[0, 1]	The texture of this concealer pallet is fantas...	4.0	great quality	1378425600	09 6, 2013
3	A1PQFP6SAJ6D80	7806397051	Norah	[2, 2]	I really can't tell what exactly this thing is...	2.0	Do not work on my face	1386460800	12 8, 2013
4	A38FVHZTNQ271F	7806397051	Nova Amor	[0, 0]	It was a little smaller than I expected, but t...	3.0	It's okay.	1382140800	10 19, 2013



Text Data is Messy

'This is a beautiful perfume! Nice, clean scent! Perfect for day or night and never gets old. I ordered this perfume (and this was the best price offered), and it came with a lotion too! That was a nice unexpected surprise!!!! :).'

Capital Letters, Punctuations, and Special Characters

'This is a beautiful perfume! Nice, clean scent! Perfect for day or night and never gets old. I ordered this perfume (and this was the best price offered), and it came with a lotion too! That was a nice unexpected surprise!!!! :).'

Stop words

'this is a beautiful perfume nice clean scent perfect for day or night
and never gets old i ordered this perfume and this was the best price
offered i and it came with a lotion too that was a nice unexpected
surprise'

Custom Stop words

'beautiful perfume nice clean scent perfect for day night never gets
old ordered perfume best price offered came with lotion too nice
unexpected surprise'

Additional Preprocessing

1. Less frequent words removed
2. Lemmatization
3. Spelling
4. White space

Messy text data to

Clean text data

'This is a beautiful perfume! Nice, clean scent! Perfect for day or night and never gets old. I ordered this perfume (and this was the best price offered), and it came with a lotion too! That was a nice unexpected surprise!!!! :).'

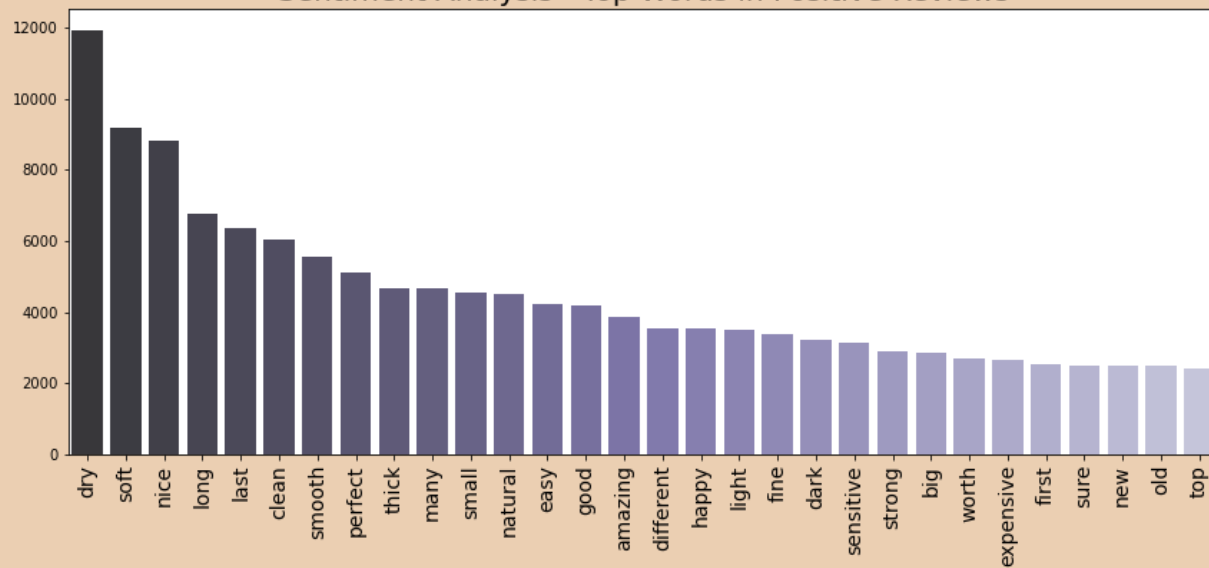
225



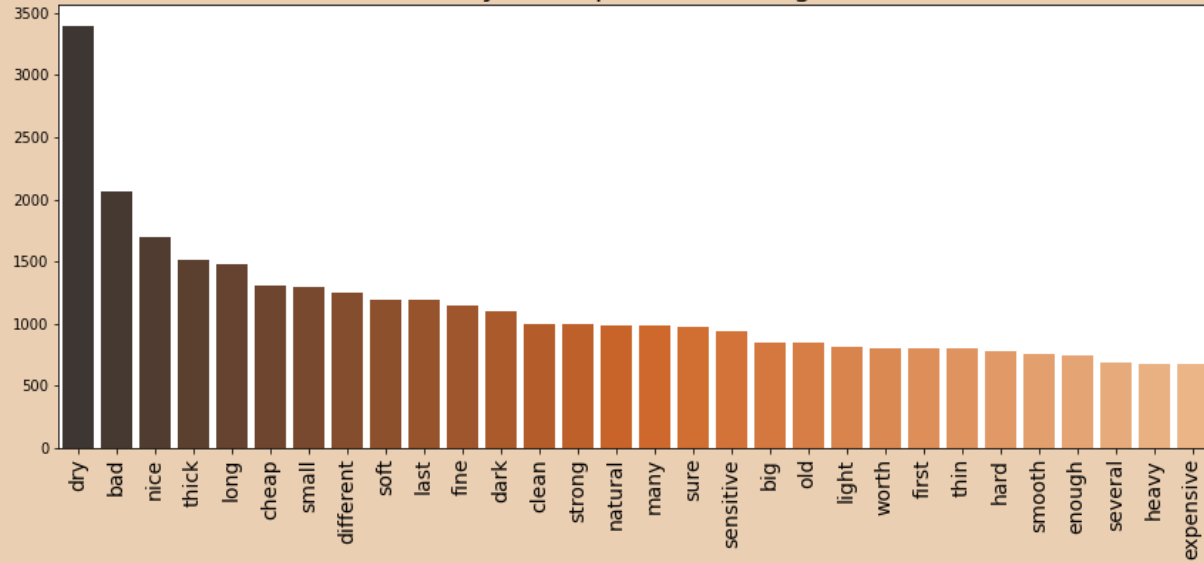
129

beautiful perfume nice clean scent perfect never get old order
perfume good price offer come lotion nice unexpected surprise

Sentiment Analysis - Top Words in Positive Reviews



Sentiment Analysis - Top Words in Negative Reviews

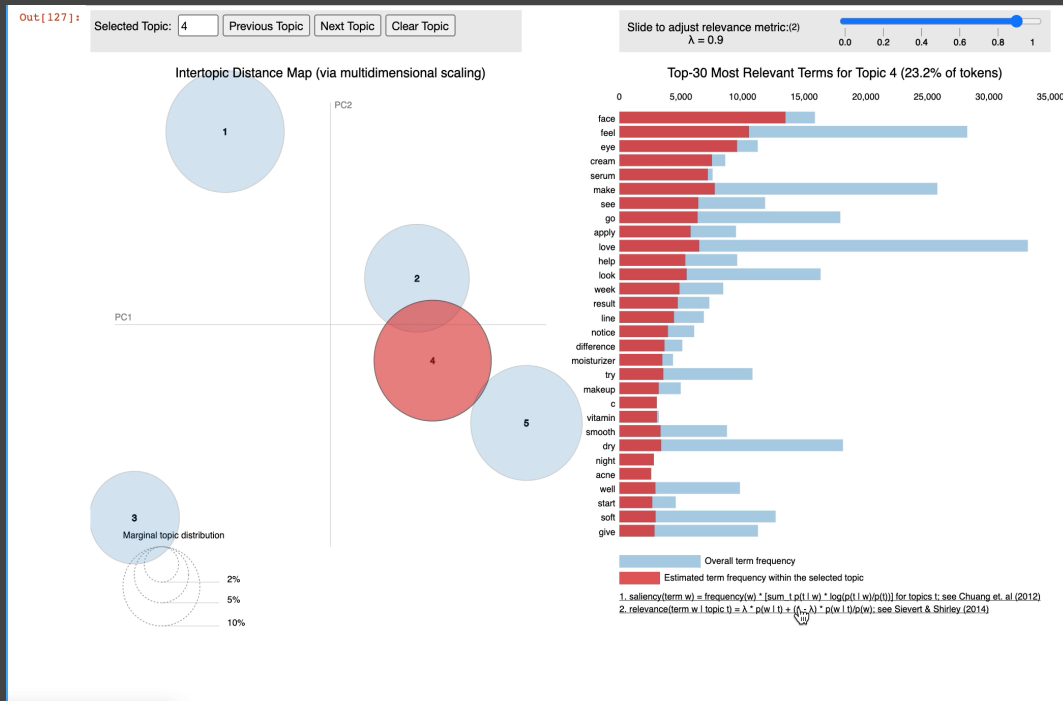


LDA Topic Modeling – works the better

	Hair	Nail	Face
Top 5 words	shampoo conditioner dry make scalp	nail polish color coat love	face eye cream feel serum

Why is it Important?

1. Brand Monitoring
2. Provide Better Product Insight
3. Target audience



Thank you

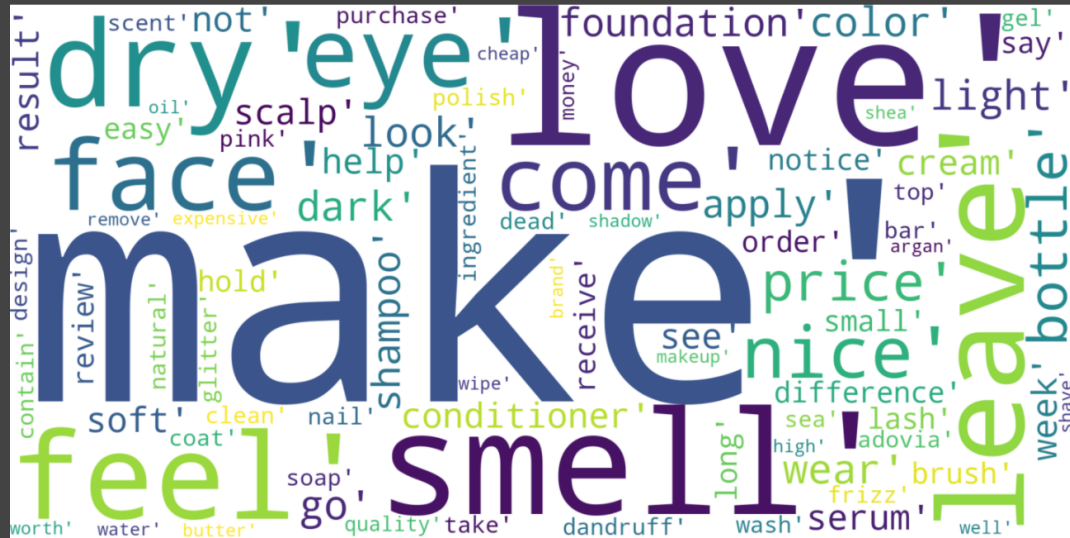
Una Bayasgalan

LinkedIn - <https://www.linkedin.com/in/undrakhbayasgalan/>

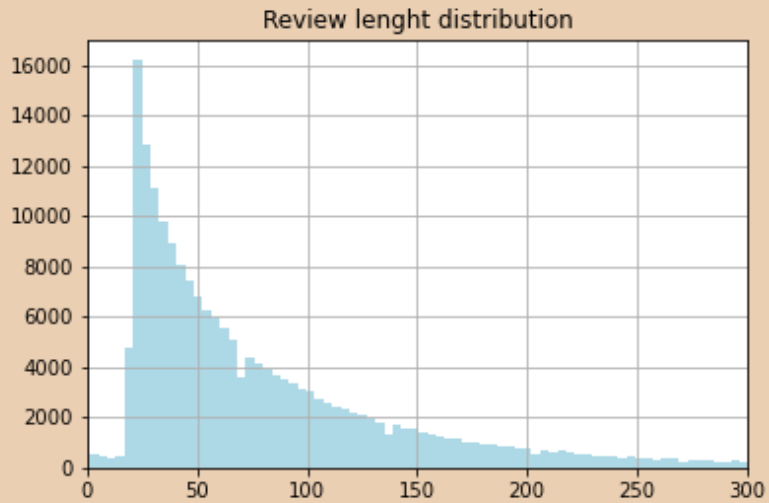
GitHub - <https://github.com/unachka>

Appendix

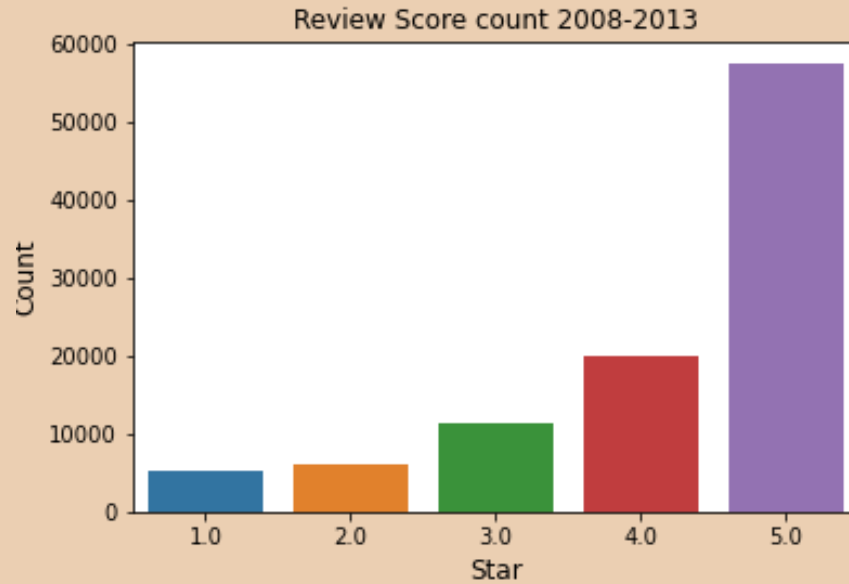
- <https://gcmatos.github.io/Ecosystem-of-data-science-tools-Geoscientists/>
 - <http://jmcauley.ucsd.edu/data/amazon/>
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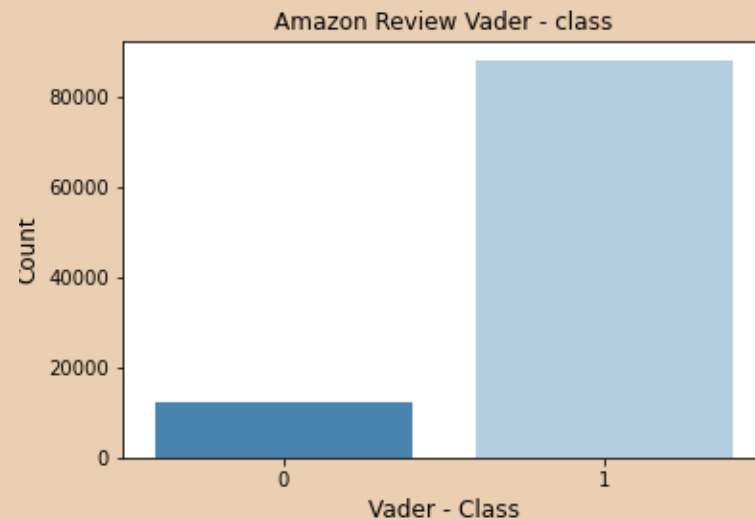
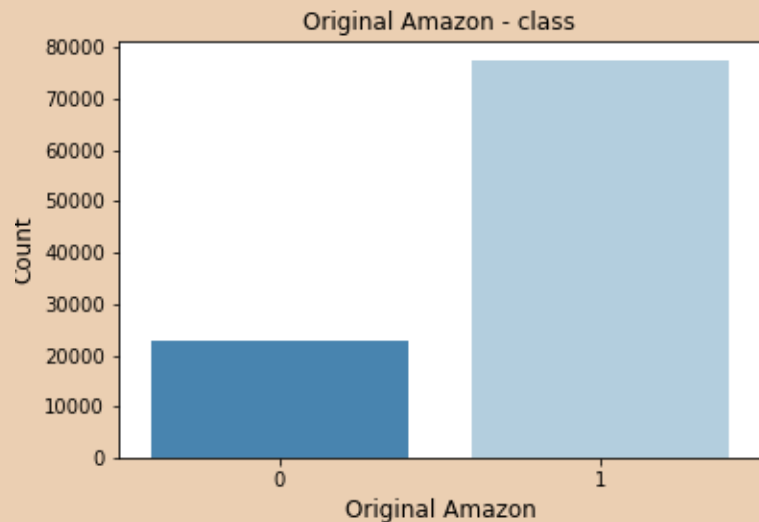
EDA



EDA



Sentiment Analysis



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