

Fragrance Recommendation System For FragranceX



Wenting Deng

Background



FragranceX

[FragranceX.com](https://www.fragrancex.com) is an online retailer sells a large selections of fragrances.

Objective:

Build a content-based recommendation engine by using product descriptions.

Business Assumption

Implement a recommendation system could help:

- Gain customized experience
- Drive sales

Scent can trigger a memory. Invoke emotion. Ignite passion.

Data & Tools

Tools

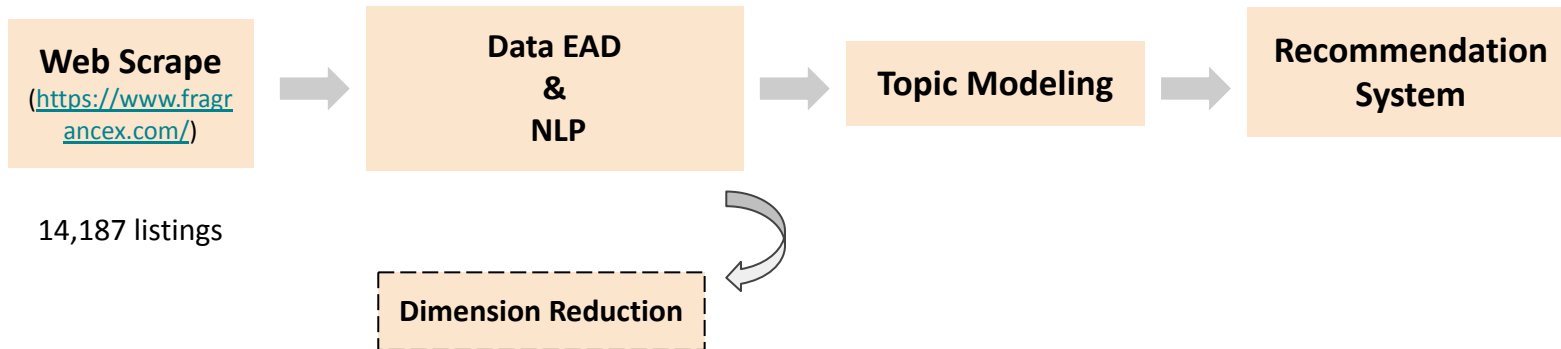
- BeautifulSoup
- Selenium
- Numpy
- Pandas
- NLTK
- Sklearn

Models

- NMF
- LSA

App

- Streamlit



Data & Tools



Bright Crystal Perfume

By VERSACE FOR WOMEN



PLAY VIDEO

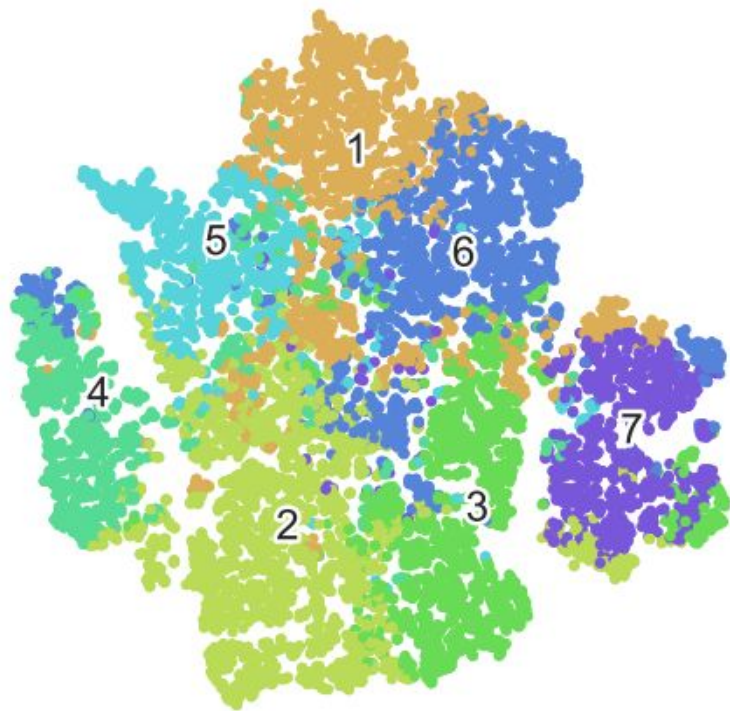
Bright Crystal Perfume by Versace, A beautifully fresh and lush fruity floral scent that's perfect for spring and summer, Bright Crystal layers shimmering blooms, radiant fruit and aqueous accords over a sensual woody amber base. The opening is a delicately tantalizing effusion of pomegranate and tart-sweet yuzu fruit mingled with a hint of frost. Aqueous florals embrace the heart, merging the lush intensity of lotus and sweet magnolia with freshest peony. A warmer base combines precious tones of acajou wood, amber and light musk to leave an ethereal, uplifting trail.

This soft fruity floral scent was created by master perfumer Alberto Morillas. The scent was released by the Italian label Versace in 2006, followed by the sweeter and more intense flanker Absolu in 2013. Other popular floral compositions by the brand include the citrus white floral Eros Pour Femme (2014), the musky amber floral Eclat de Rose (2019), the white floral amber Couture Jasmine (2014) and the powdery citrus floral Yellow Diamond (2011). **All products are original, authentic name brands. We do not sell knockoffs or imitations.**

Average length of document:

150 words (exl. punctuations and numbers)

The Topics



NMF - 7topics:

Topic 1: Woody

Topic 2: Floral

Topic 3: Fashionable/Popular

Topic 4: Oriental

Topic 5: Simple

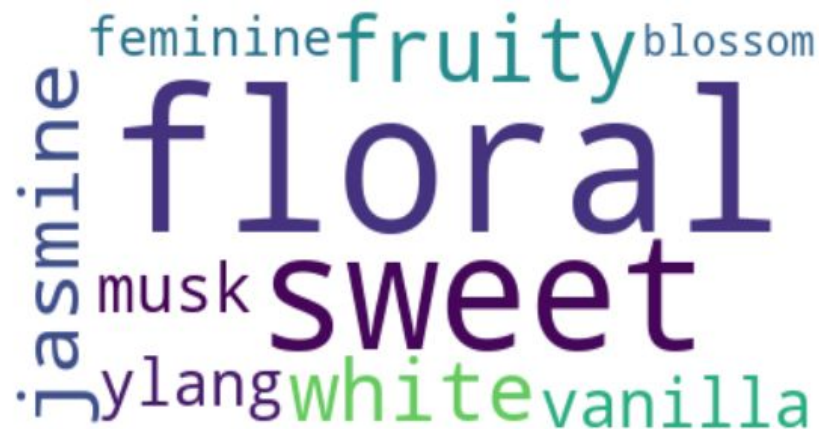
Topic 6: Fresh

Topic 7: Long Lasting

The Topics



Topic 1: Woody



Topic 2: Floral

Rec System



Fragrance Recommendation Engine

Search

Zozo Cologne

Submit

1. Zozo Cologne
2. Splendid Pour Homme Cologne
3. Hollister Not Tide Down Cologne
4. Derrick Silver Cologne
5. Penthouse Legendary Cologne

Product name:

5 most similar items (include itself)

Fragrance Recommendation Engine

Search

Zippo

Submit

1. Zippo Silver Cologne
2. Zippo Pink Cologne
3. Zippo Original Cologne
4. Zippo Mythos Cologne
5. Zippo Green Cologne

Brand name:

5 most popular items (by reviews)

Fragrance Recommendation Engine

Search

sunny

Submit

1. Backyardigan Perfume
2. Club De Nuit Milestone Cologne
3. Bratz Jade Perfume
4. Clean Rain Perfume
5. Demeter Daffodil Perfume

Other words:

5 most relevant products

— — —

Appendix

Appendix One

Woody

spicy, patchouli, woody, black, oud, warm, blend, wood, leather, oriental, spice, heart, house, cedar, pepper

Floral

floral, sweet, fruity, white, jasmine, vanilla, musk, ylang, feminine, blossom, orange, heart, peach, flower, powdery

Fashionable/ Popular

fashion, designer, design, house, clothing, accessory, collection, famous, industry, couture, style, dior, menswear, orange, success

Oriental

aroma, elixir, sensual, seductive, night, concoction, rich, essence, combine, flacon, exotic, chic, sophisticated, sens, delectable

Simple

body, fantasy, quality, parfums, mist, simple, coeur, collection, addition, aroma, candle, affordable, signature, sugar, composition

Fresh

green, citrus, fresh, aromatic, lemon, clean, leaf, woody, crisp, summer, cool, blue, bergamot, tea, orange

Long Lasting

moderate, sillage, longevity, lasting, spring, summer, heavy, floral, middle, fall, occasion, woody, base, long, winter

Appendix Two



Topic 3



Topic 4

Appendix Two



A word cloud for Topic 5. The words are arranged in a circular pattern. The largest word is 'body' in dark blue. Other prominent words include 'fantasy' in light green, 'parfums' in dark blue, 'quality' in dark blue, 'mist' in dark blue, 'addition' in light green, 'simple' in light green, 'collection' in light green, 'aroma' in light green, and 'coeur' in light green.

body
fantasy
parfums
quality
mist
addition
simple
collection
aroma
coeur

Topic 5



A word cloud for Topic 6. The words are arranged in a circular pattern. The largest word is 'green' in dark purple. Other prominent words include 'citrus' in light green, 'fresh' in light green, 'lemon' in light green, 'aromatic' in dark blue, 'clean' in dark blue, 'woody' in light green, 'crisp' in light green, 'leaf' in light green, and 'summer' in light green.

green
citrus
fresh
lemon
aromatic
clean
woody
crisp
leaf
summer

Topic 6

Appendix Two



A word cloud visualization for Topic 7. The words are arranged in a cluster, with 'sillage' and 'moderate' being the most prominent. Other words include 'lasting', 'heavy', 'floral', 'spring', 'middle', 'fall', 'summer', and 'longevity'. The colors of the words vary, with 'sillage' in green, 'moderate' in blue, and others in shades of purple, green, and blue.

lasting
sillage
heavy floral spring middle
fall
moderate
summer longevity

Topic 7