DRINKS and COCKTAILS RECOMMENDATION SYSTEM

Steven L Truong

Friday 05/27/2021

MOTIVATION

1800
SEAHAWKS
ABSOLUT
VODKA
Tito's
HENDRICK'S
BEEFEATER
MONARCH
RUM

WORKFLOW

WORKFLOW

DATA

Scrape data and
API calling

WORKFLOW

DATA

Scrape data and API calling

EDA

Visualize the data and sentiment analysis

WORKFLOW

DATA

Scrape data and API calling

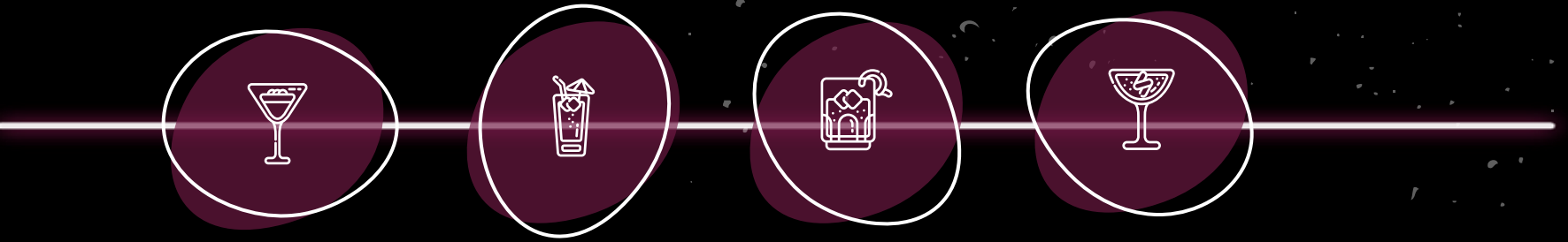
EDA

Visualize the data and sentiment analysis

TOPIC MODELING

TF-IDF Vectorizer and NMF(15)

WORKFLOW



DATA

Scrape data and API calling

EDA

Visualize the data and sentiment analysis

TOPIC MODELING

TF-IDF Vectorizer and NMF(15)

REC-SYS

Take user's input and recommend the most relevant products

WORKFLOW

DATA

Scrape data and API calling

EDA

Visualize the data and sentiment analysis

TOPIC MODELING

TF-IDF Vectorizer and NMF(15)

REC-SYS

Take user's input and recommend the most relevant products

DEPLOYMENT

Build streamlit app and deploy to share.streamlit

DATA GATHERING

Scraped from multiple sources and API calling

Full Review

BUY IT NOW

Jacob Franklin 2015 Hoffman Lane, Cabernet Sauvignon, Napa Valley

Pair this wine with:

Category: Cabernet Sauvignon
Date Tasted: 7/28/2020
Country: USA
Alcohol: 15.2%

95 Points

Gold Medal

Exceptional

$75

Cellar Selection

Black ruby color. Complex aromas of cinnamon potpourri, damson plum, black tea, carob, olive tapenade, and bay leaf with a round, vibrant, dryish medium-full body and a tingling, complex, long cumin, rose water, dark chocolate, and anise finish with moderate oak flavor. A bold, intensely complex Cabernet Sauvignon with huge aromatics of herbs and spices; exotic, conversation-worthy, and should be the centerpiece of the table.

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Tasting Info

Style:	Fruity, Juicy & Smooth, Oaky, New World, Rich & Full & Spicy & Complex
Aroma:	cinnamon potpourri, damson plum, black tea, carob, olive tapenade, and bay leaf
Flavor:	cumin, rose water, dark chocolate, and anise
Sweetness:	Dryish
Enjoy:	Now-3 years on its own and with food
Pairing:	Rack of Baby Lamb, Steak & Potatoes, Beef Stew
Bottom Line:	A bold, intensely complex Cabernet Sauvignon with huge aromatics of herbs and spices; exotic, conversation-worthy, and should be the centerpiece of the table.

Cabernet Sauvignon

Serve in a Cabernet Wine Glass

About Cabernet Sauvignon

Cabernet Sauvignon is a variety that is the source of some of the world's most celebrated and longest-lived reds. Grown in many countries, it is most famous in Bordeaux, where it is the principal grape in red Bordeaux as well as in California – especially Napa Valley- where it is labeled by its varietal name.

Cabernet Sauvignon has aromas and flavors of black currant, cassis, black cherry and sometimes plum (in warmer regions or vintages). Quite rich on the palate, the variety is very tannic, giving its wines a bitter edge in their youth, but also providing the wines with great aging potential, with top flight examples drinking well for as long as four or five decades. Given their richness and flavor profile, wines made from Cabernet Sauvignon need to be paired with rich red meats, such as steaks and roasts as well as game.

Besides France and California, other countries with warm growing regions also excel with Cabernet Sauvignon. These include the Maipo and Colchagua Valleys in Chile as well as the Bolgheri district, situated on the coast of Tuscany.

Exploratory data analysis

EDA and sentiment analysis

EDA and Sentiment Analysis

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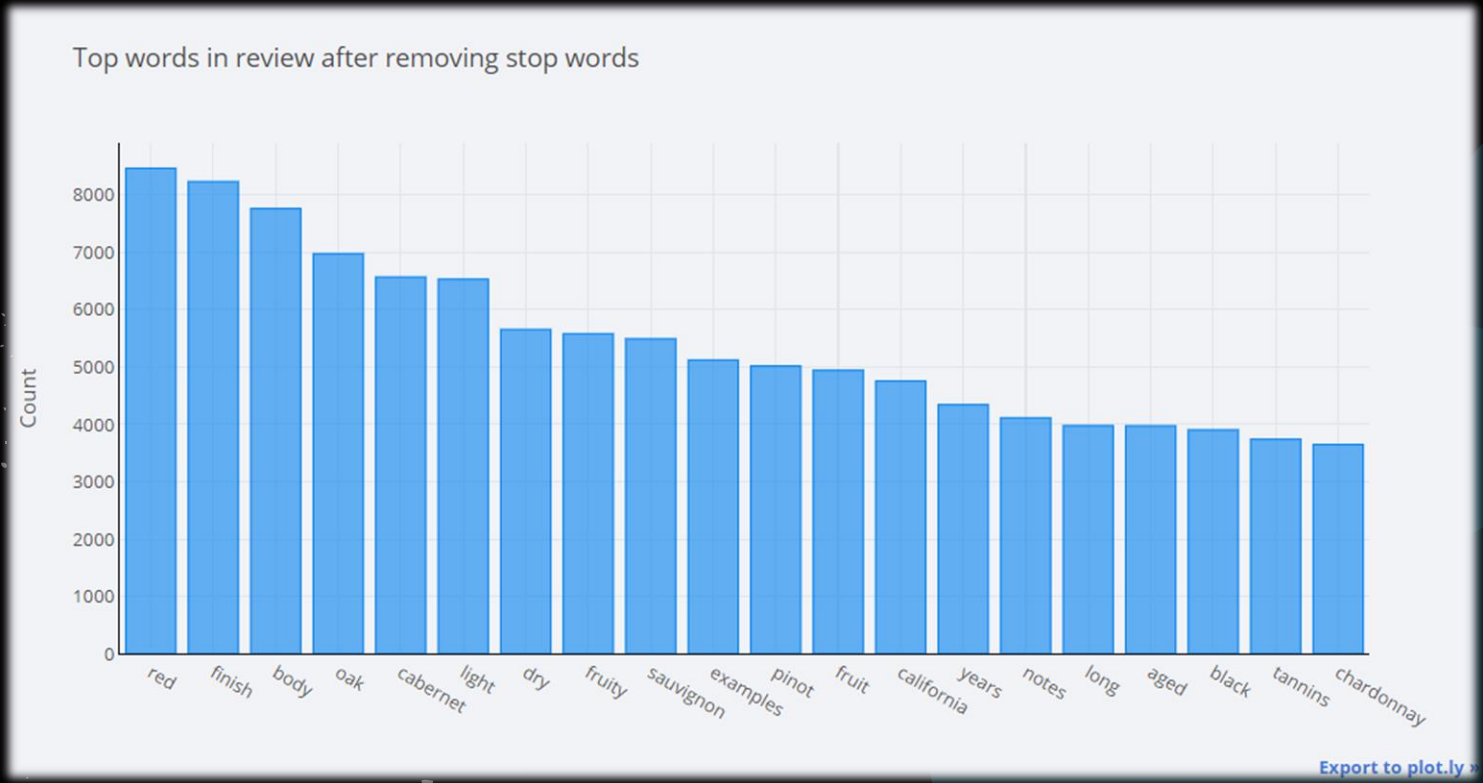
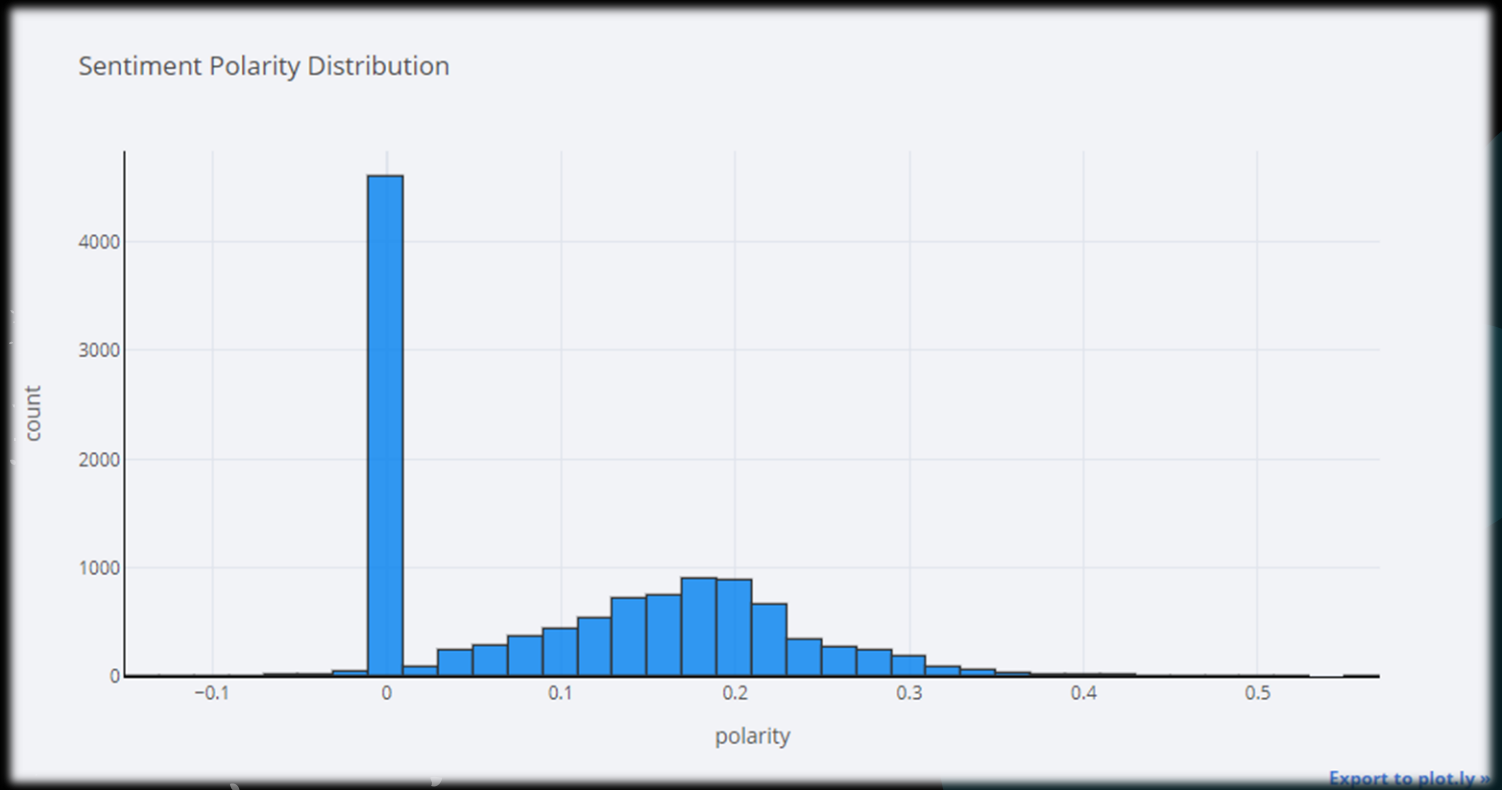


EDA and Sentiment Analysis

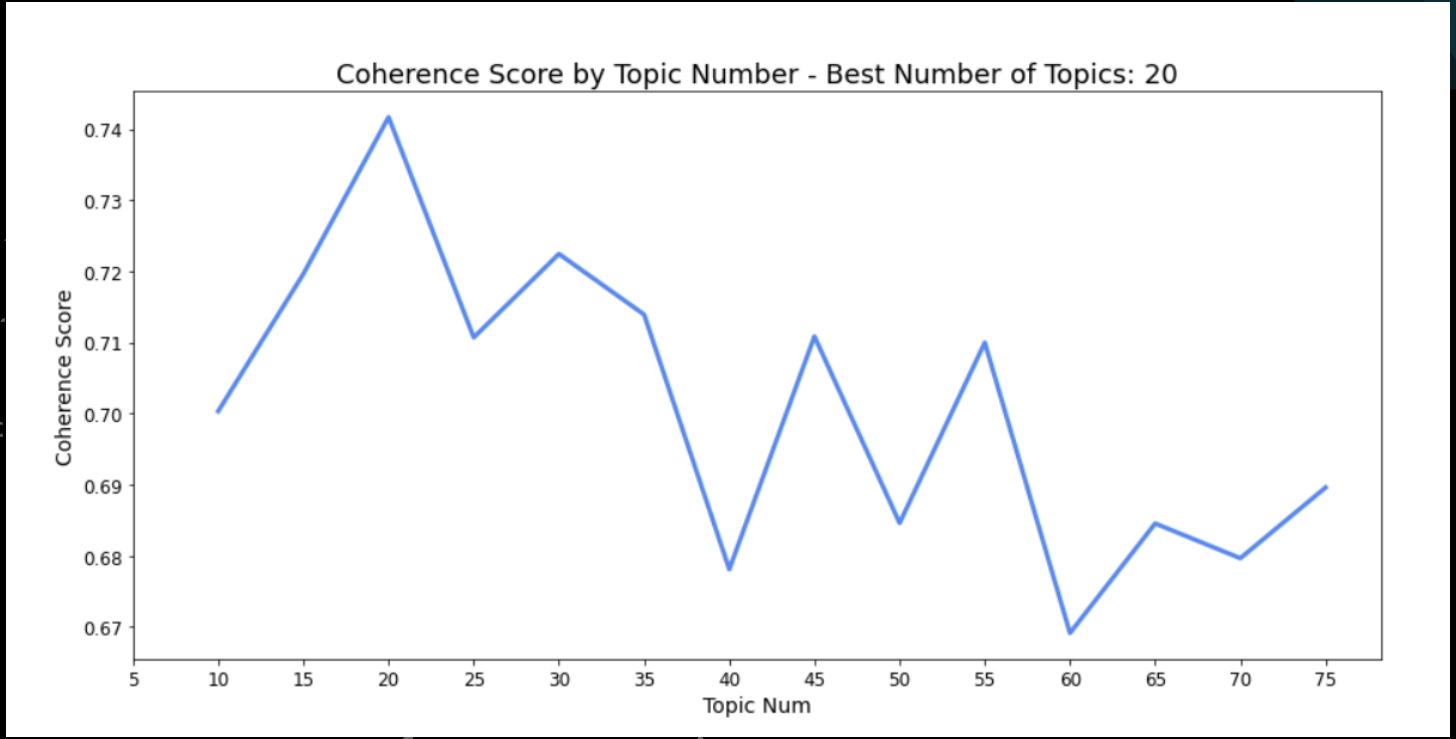


Topic Modeling

TF-IDF Vectorizer and NMF(15 components)

Coherence Scores

Coherence Scores



15 topics

15 topics

Based on type and flavor of alcohols
Let's take a look at few topics

List of topics

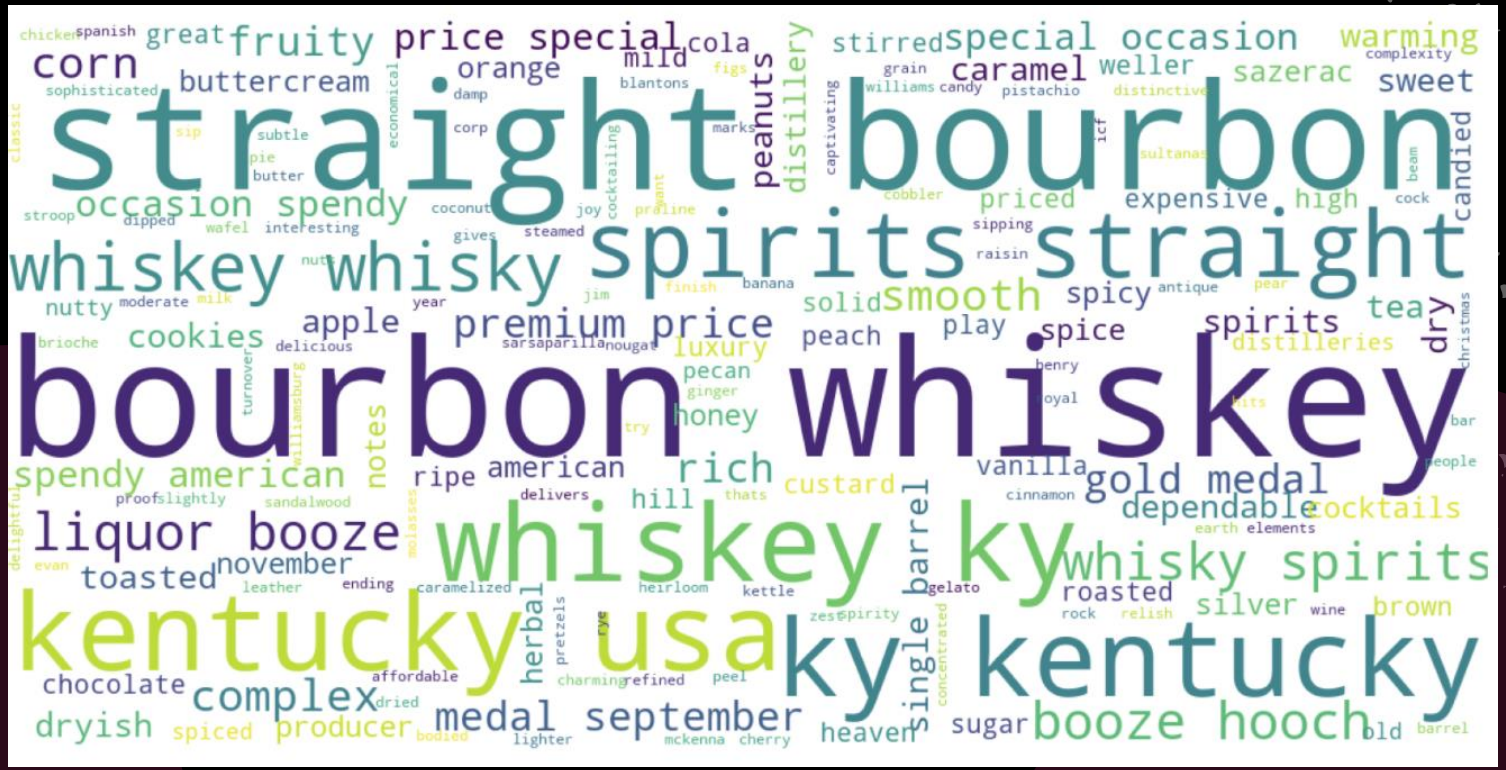
1. Cheap, affordable, good value
2. Bittering hop IPA
3. White and spiced Rum
4. Oaky, fruity Red blend and Merlot
5. Dried sour cherries flavored Pinot Noir
6. Sweet and fruity cider
7. Dry and oaky Chardonnay
8. Non-smoky, sweet Rose
9. Fruity Sauvignon Blanc
10. Straight and flavored Vodka
11. Whiskey (Bourbon and Scotch)
12. Sweet, light, and corn beer
13. Smooth and dry tequila
14. Cocktail mixers (ready-to-drink cocktails)
15. Dry Gin

Cheap, affordable, good value

Cheap, affordable, good value

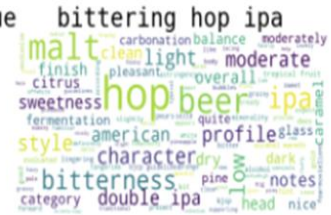
Whiskey, bourbon with rich flavor

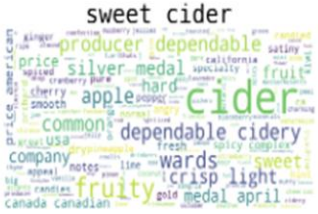
Whiskey, bourbon with rich flavor

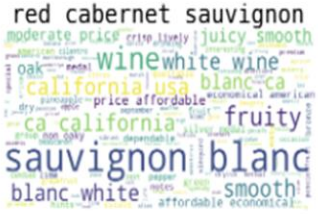


All 15 topics

All 15 topics







Recommendation System Application Deployment

Build and deploy to streamlit

DEMONSTRATION

How do we know that our system work? Let's see it in action!

FUTURE WORK

ALGORITHMS

- Try other clustering algorithms (K-means, DBSCAN)
- Optimize the recommendation system

DATA

- Gather more data to recommend users.

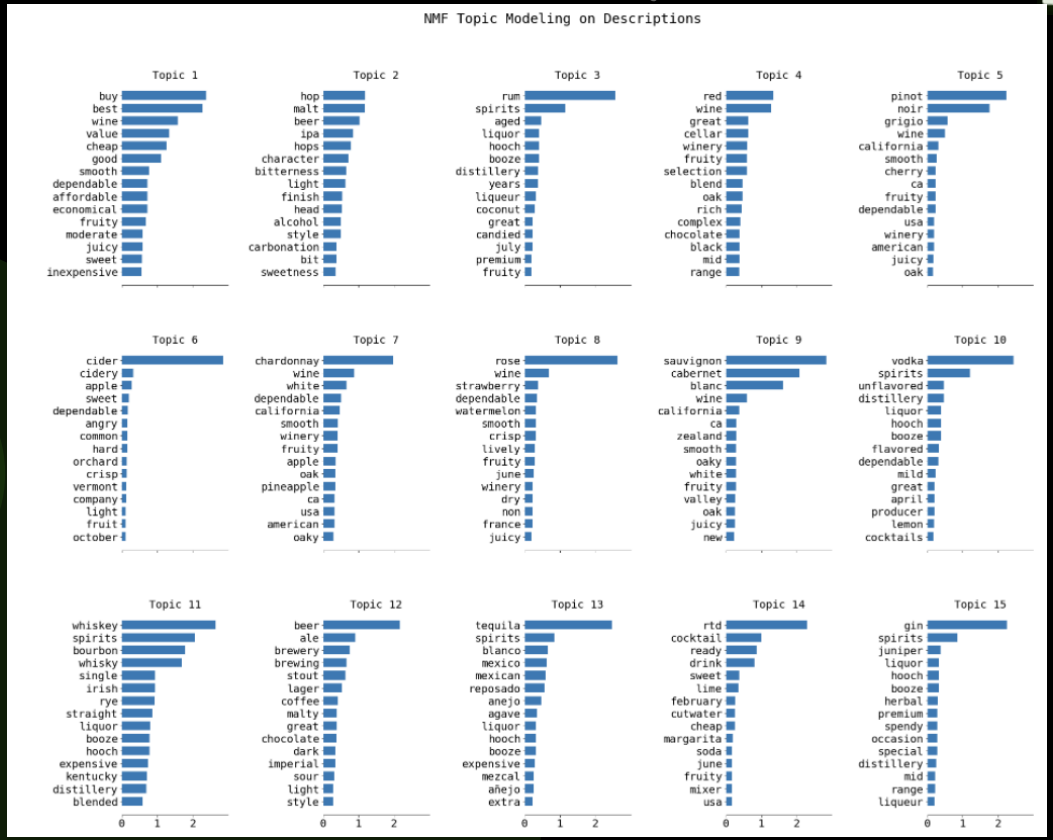
THANK YOU

Steven L Truong

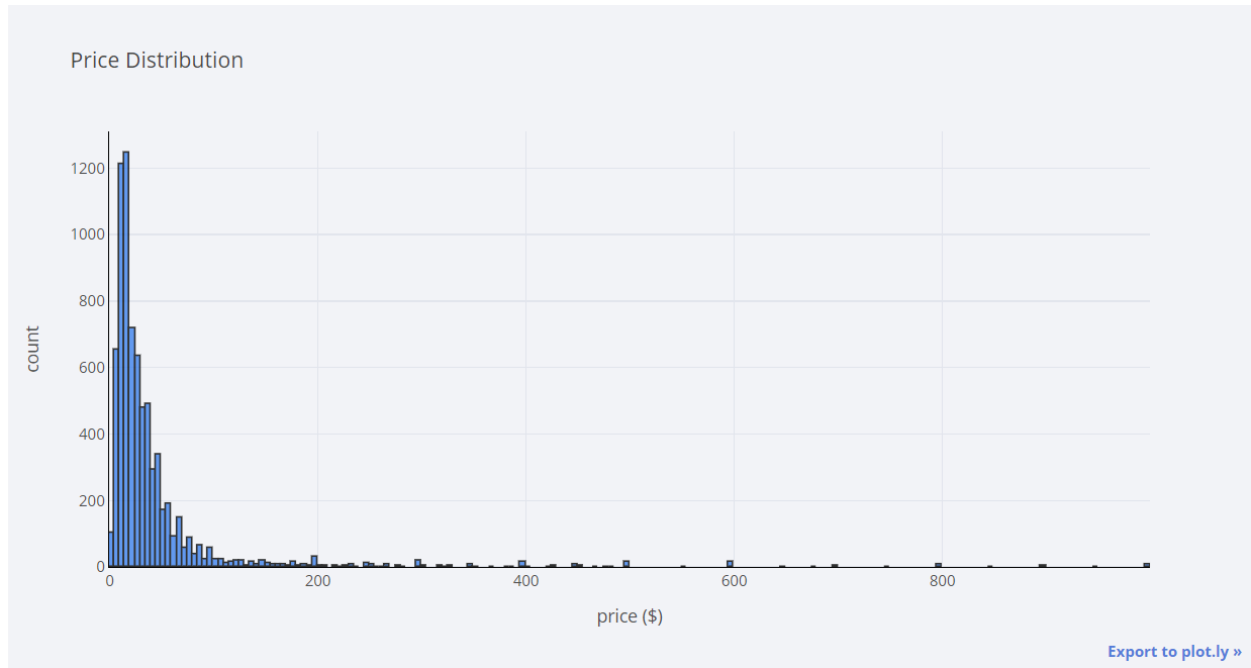
Please reach out to me at

https://www.linkedin.com/in/luongtruong77/

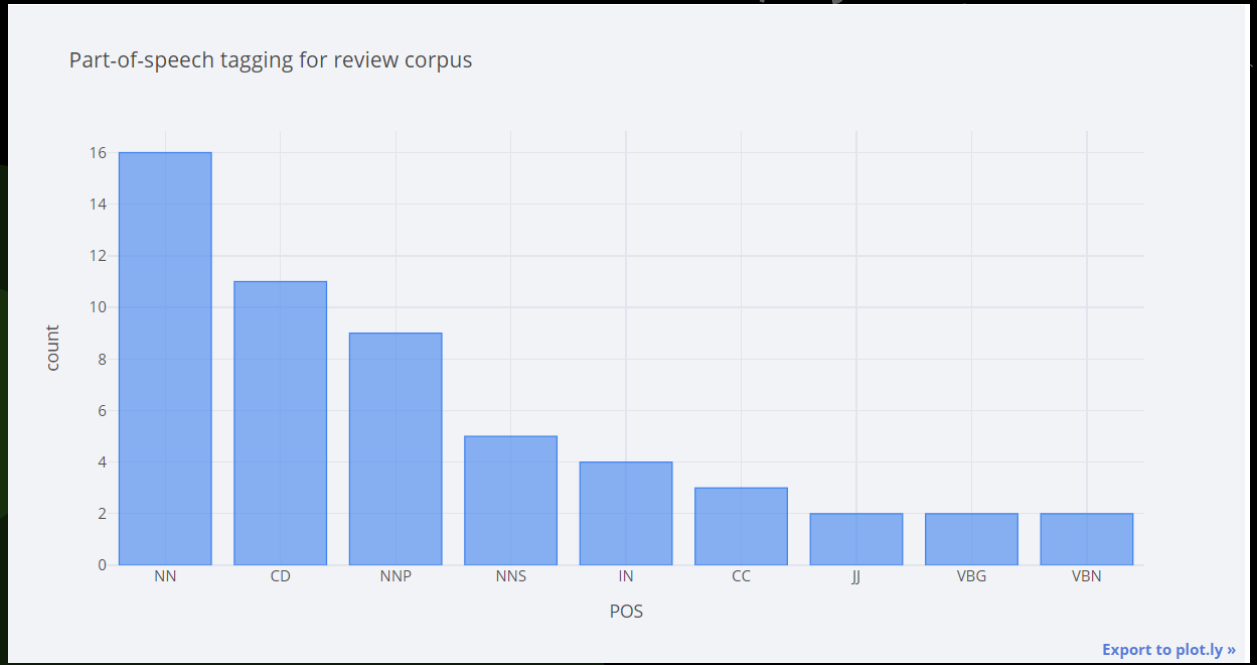
Appendix

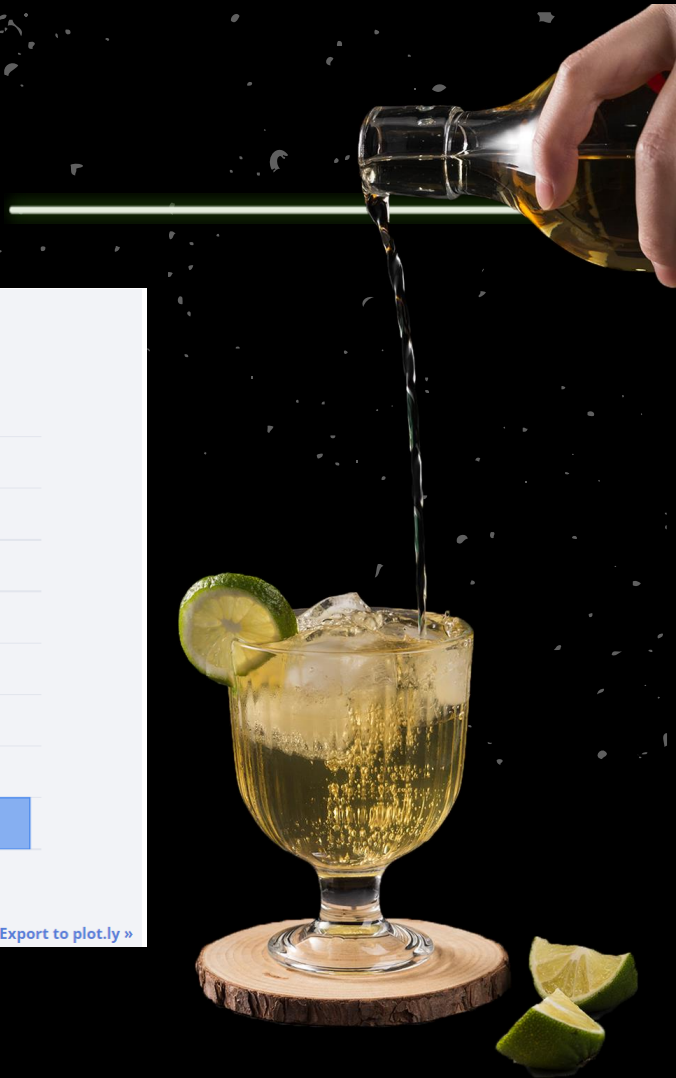

NMF Topic Modeling on Descriptions
Topic 1
buy
best
wine
value
cheap
good
smooth
dependable
affordable
economical
fruity
moderate
juicy
sweet
inexpensive
Topic 2
hop
malt
beer
ipa
hops
character
bitterness
light
finish
head
alcohol
style
carbonation
bit
sweetness
Topic 3
rum
spirits
aged
liquor
hooch
booze
distillery
years
liqueur
coconut
great
candied
july
premium
fruity
Topic 4
red
wine
great
cellar
winery
fruity
selection
blend
oak
rich
complex
chocolate
black
mid
range
Topic 5
pinot
noir
grigio
wine
california
smooth
cherry
ca
fruity
dependable
usa
winery
american
juicy
oak
Topic 6
cider
cidery
apple
sweet
dependable
angry
common
hard
orchard
crisp
vermont
company
light
fruit
october
Topic 7
chardonnay
wine
white
dependable
california
smooth
winery
fruity
apple
oak
pineapple
ca
usa
american
oaky
Topic 8
rose
wine
strawberry
dependable
watermelon
smooth
crisp
lively
fruity
june
winery
dry
non
france
juicy
Topic 9
sauvignon
cabernet
blanc
wine
california
ca
zealand
smooth
oaky
white
fruity
valley
oak
juicy
new
Topic 10
vodka
spirits
unflavored
distillery
liquor
hooch
booze
flavored
dependable
mild
great
april
producer
lemon
cocktails
Topic 11
whiskey
spirits
bourbon
whisky
single
irish
rye
straight
liquor
booze
hooch
expensive
kentucky
distillery
blended
0
1
2
Topic 12
beer
ale
brewery
brewing
stout
lager
coffee
malty
great
chocolate
dark
imperial
sour
light
style
0
1
2
Topic 13
tequila
spirits
blanco
mexico
mexican
reposado
anejo
agave
liquor
hooch
booze
expensive
mezcal
añejo
extra
0
1
2
Topic 14
rtd
cocktail
ready
drink
sweet
lime
february
cutwater
cheap
margarita
soda
june
fruity
mixer
usa
0
1
2
Topic 15
gin
spirits
juniper
liquor
hooch
booze
herbal
premium
spendy
occasion
special
distillery
mid
range
liqueur
0
1
2

Appendix


Price Distribution
count
1200
1000
800
600
400
200
0
0
200
400
600
800
price ($)
Export to plot.ly »

Appendix


Part-of-speech tagging for review corpus
count
16
14
12
10
8
6
4
2
0
NN
CD
NNP
NNS
IN
CC
JJ
VBG
VBN
POS
Export to plot.ly »



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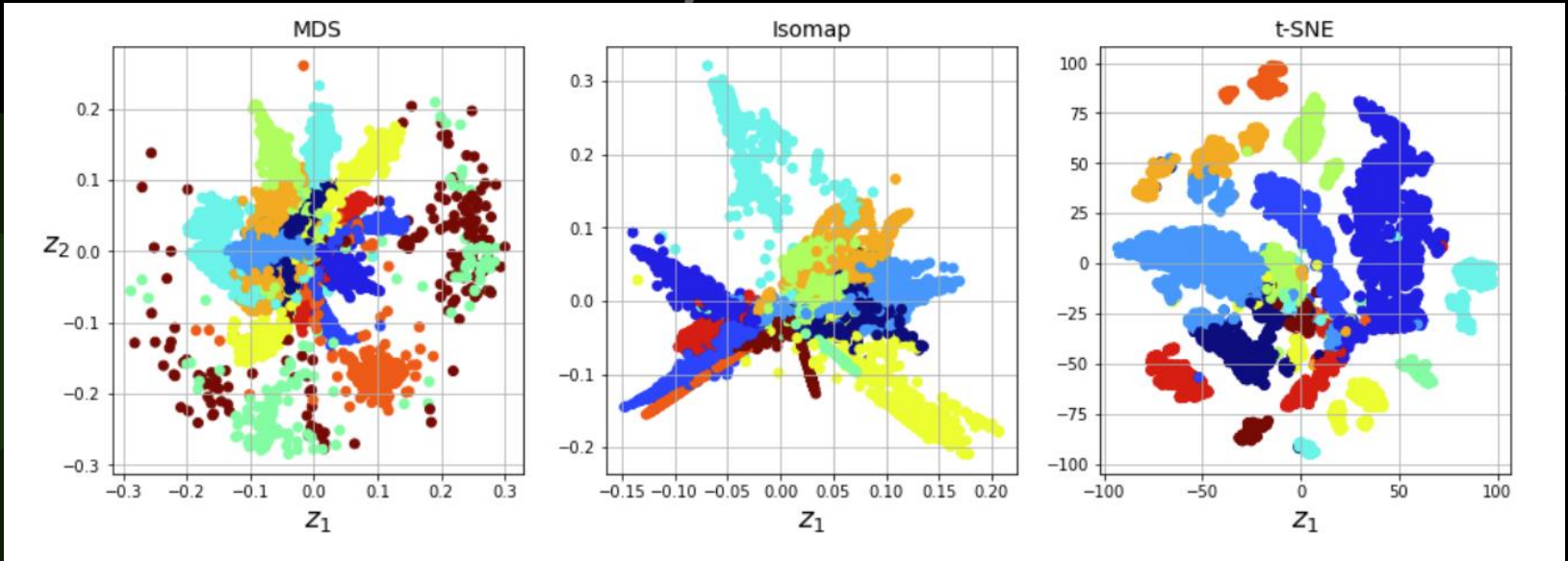
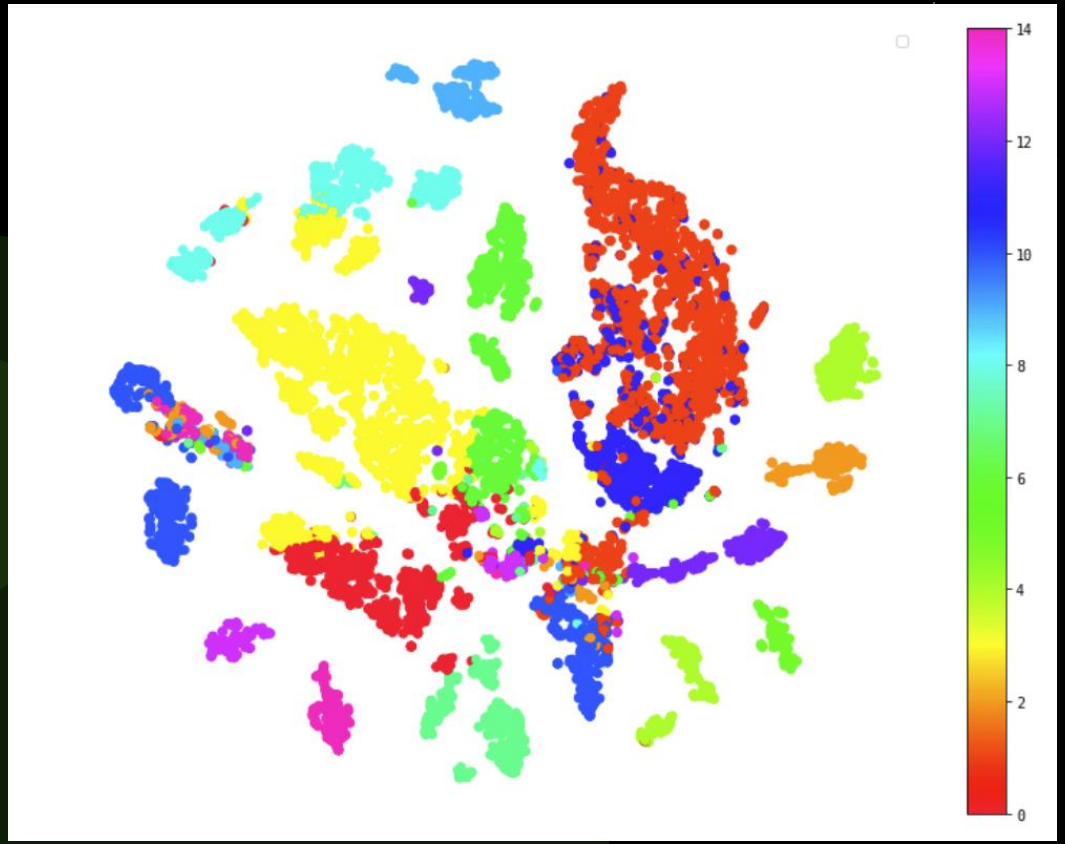
Appendix