

# Restaurant recommendation system with Python

April 4, 2021

To create the Restaurant recommendation system, I will create a content-based recommendation system where when I enter the name of a restaurant, the Restaurant recommendation system will look at reviews from other restaurants, and System will recommend us to the other restaurants with similar reviews and sort them from the top-rated.

```
[5]: import pandas as pd
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt
import re

import warnings
warnings.filterwarnings('always')
warnings.filterwarnings('ignore')
from sklearn.metrics.pairwise import linear_kernel
from sklearn.metrics.pairwise import cosine_similarity
from sklearn.feature_extraction.text import CountVectorizer
from sklearn.feature_extraction.text import TfidfVectorizer
```

```
[6]: df=pd.read_csv('zomato.csv')
```

```
[7]: df.head()
```

```
[7]:
```

|   | url \   | address   | name \                |
|---|---|---|-----------------------|
| 0 | https://www.zomato.com/bangalore/jalsa-banasha... | 942, 21st Main Road, 2nd Stage, Banashankari, ... | Jalsa                 |
| 1 | https://www.zomato.com/bangalore/spice-elephan... | 2nd Floor, 80 Feet Road, Near Big Bazaar, 6th ... | Spice Elephant        |
| 2 | https://www.zomato.com/SanchurroBangalore?cont... | 1112, Next to KIMS Medical College, 17th Cross... | San Churro Cafe       |
| 3 | https://www.zomato.com/bangalore/addhuri-udupi... | 1st Floor, Annakuteera, 3rd Stage, Banashankar... | Addhuri Udupi Bhojana |
| 4 | https://www.zomato.com/bangalore/grand-village... | 10, 3rd Floor, Lakshmi Associates, Gandhi Baza... | Grand Village         |

| online_order | book_table | rate | votes | phone \ |
|--------------|------------|------|-------|---------|
|--------------|------------|------|-------|---------|

|   |     |     |       |     |                                  |
|---|-----|-----|-------|-----|----------------------------------|
| 0 | Yes | Yes | 4.1/5 | 775 | 080 42297555\r\n+91 9743772233   |
| 1 | Yes | No  | 4.1/5 | 787 | 080 41714161                     |
| 2 | Yes | No  | 3.8/5 | 918 | +91 9663487993                   |
| 3 | No  | No  | 3.7/5 | 88  | +91 9620009302                   |
| 4 | No  | No  | 3.8/5 | 166 | +91 8026612447\r\n+91 9901210005 |

|   | location           | rest_type \   |
|---|--------------------|---------------|
| 0 | Banashankari       | Casual Dining |
| 1 | Banashankari       | Casual Dining |
| 2 | Banashankari Cafe, | Casual Dining |
| 3 | Banashankari       | Quick Bites   |
| 4 | Basavanagudi       | Casual Dining |

|   | dish_liked \                                      |
|---|---|
| 0 | Pasta, Lunch Buffet, Masala Papad, Paneer Laja... |
| 1 | Momos, Lunch Buffet, Chocolate Nirvana, Thai G... |
| 2 | Churros, Cannelloni, Minestrone Soup, Hot Choc... |
| 3 | Masala Dosa                                       |
| 4 | Panipuri, Gol Gappe                               |

|   | cuisines approx_cost(for two people) \ |
|---|--|
| 0 | North Indian, Mughlai, Chinese 800     |
| 1 | Chinese, North Indian, Thai 800        |
| 2 | Cafe, Mexican, Italian 800             |
| 3 | South Indian, North Indian 300         |
| 4 | North Indian, Rajasthani 600           |

|   | reviews_list menu_item \                            |
|---|---|
| 0 | [('Rated 4.0', 'RATED\n A beautiful place to ... [] |
| 1 | [('Rated 4.0', 'RATED\n Had been here for din... [] |
| 2 | [('Rated 3.0', 'RATED\n Ambience is not that ... [] |
| 3 | [('Rated 4.0', 'RATED\n Great food and proper... [] |
| 4 | [('Rated 4.0', 'RATED\n Very good restaurant ... [] |

|   | listed_in(type) | listed_in(city) |
|---|-----------------|-----------------|
| 0 | Buffet          | Banashankari    |
| 1 | Buffet          | Banashankari    |
| 2 | Buffet          | Banashankari    |
| 3 | Buffet          | Banashankari    |
| 4 | Buffet          | Banashankari    |

```
[8]: df.shape
```

```
[8]: (51717, 17)
```

```
[9]: df.columns
```

```
[9]: Index(['url', 'address', 'name', 'online_order', 'book_table', 'rate', 'votes',  
         'phone', 'location', 'rest_type', 'dish_liked', 'cuisines',  
         'approx_cost(for two people)', 'reviews_list', 'menu_item',  
         'listed_in(type)', 'listed_in(city)'],  
        dtype='object')
```

```
[10]: zomato=df.drop(['url','dish_liked','phone'],axis=1)
```

```
[11]: zomato.duplicated().sum()
```

```
[11]: 43
```

```
[12]: zomato.drop_duplicates(inplace=True)
```

```
[13]: zomato.duplicated().sum()
```

```
[13]: 0
```

```
[14]: zomato.isnull().sum()
```

```
[14]: address          0  
      name            0  
      online_order    0  
      book_table      0  
      rate            7767  
      votes           0  
      location        21  
      rest_type       227  
      cuisines        45  
      approx_cost(for two people)  345  
      reviews_list    0  
      menu_item       0  
      listed_in(type)  0  
      listed_in(city)  0  
      dtype: int64
```

```
[15]: zomato.dropna(inplace=True)
```

```
[16]: zomato.isnull().sum()
```

```
[16]: address          0  
      name            0  
      online_order    0  
      book_table      0  
      rate            0  
      votes           0  
      location        0  
      rest_type       0
```

```

cuisines          0
approx_cost(for two people)  0
reviews_list      0
menu_item         0
listed_in(type)   0
listed_in(city)   0
dtype: int64

```

```
[17]: zomato=zomato.rename(columns={'approx_cost(for two people)':
    ↪ 'cost', 'listed_in(type)': 'type', 'listed_in(city)': 'city'})
```

```
[18]: zomato.columns
```

```
[18]: Index(['address', 'name', 'online_order', 'book_table', 'rate', 'votes',
    'location', 'rest_type', 'cuisines', 'cost', 'reviews_list',
    'menu_item', 'type', 'city'],
    dtype='object')
```

```
[19]: zomato['cost']=zomato['cost'].astype(str)
zomato['cost']=zomato['cost'].apply(lambda x:x.replace(',','.'))
zomato['cost']=zomato['cost'].astype(float)
zomato['cost']
```

```
[19]: 0      800.0
1      800.0
2      800.0
3      300.0
4      600.0
...
51709   800.0
51711   800.0
51712     1.5
51715     2.5
51716     1.5
Name: cost, Length: 43499, dtype: float64
```

```
[20]: zomato['rate']
```

```
[20]: 0      4.1/5
1      4.1/5
2      3.8/5
3      3.7/5
4      3.8/5
...
51709   3.7 /5
51711   2.5 /5
51712   3.6 /5
```

```
51715    4.3 /5
51716    3.4 /5
Name: rate, Length: 43499, dtype: object
```

```
[21]: #Removing '/5' from ratings
zomato= zomato.loc[zomato.rate !='NEW']
zomato=zomato.loc[zomato.rate !='-'].reset_index(drop=True)
remove_slash = lambda x:x.replace('/5','') if type(x)==np.str else x
zomato.rate= zomato.rate.apply(remove_slash).str.strip().astype('float')
```

```
[22]: #djusting the column names
zomato.name=zomato.name.apply(lambda x:x.title())
zomato.online_order.replace(('Yes','No'),('True','False'),inplace=True)
zomato.book_table.replace(('Yes','No'),('True','False'),inplace=True)
```

```
[23]: zomato.head(5)
```

```
[23]:
```

|   | address   | name \                |
|---|---|-----------------------|
| 0 | 942, 21st Main Road, 2nd Stage, Banashankari, ... | Jalsa                 |
| 1 | 2nd Floor, 80 Feet Road, Near Big Bazaar, 6th ... | Spice Elephant        |
| 2 | 1112, Next to KIMS Medical College, 17th Cross... | San Churro Cafe       |
| 3 | 1st Floor, Annakuteera, 3rd Stage, Banashankar... | Addhuri Udupi Bhojana |
| 4 | 10, 3rd Floor, Lakshmi Associates, Gandhi Baza... | Grand Village         |

|   | online_order | book_table | rate | votes | location     | rest_type \         |
|---|--------------|------------|------|-------|--------------|---------------------|
| 0 | True         | True       | 4.1  | 775   | Banashankari | Casual Dining       |
| 1 | True         | False      | 4.1  | 787   | Banashankari | Casual Dining       |
| 2 | True         | False      | 3.8  | 918   | Banashankari | Cafe, Casual Dining |
| 3 | False        | False      | 3.7  | 88    | Banashankari | Quick Bites         |
| 4 | False        | False      | 3.8  | 166   | Basavanagudi | Casual Dining       |

|   | cuisines                       | cost \ |
|---|--------------------------------|--------|
| 0 | North Indian, Mughlai, Chinese | 800.0  |
| 1 | Chinese, North Indian, Thai    | 800.0  |
| 2 | Cafe, Mexican, Italian         | 800.0  |
| 3 | South Indian, North Indian     | 300.0  |
| 4 | North Indian, Rajasthani       | 600.0  |

|   | reviews_list                                     | menu_item | type \ |
|---|--|-----------|--------|
| 0 | [('Rated 4.0', 'RATED\n A beautiful place to ... | []        | Buffet |
| 1 | [('Rated 4.0', 'RATED\n Had been here for din... | []        | Buffet |
| 2 | [('Rated 3.0', 'RATED\n Ambience is not that ... | []        | Buffet |
| 3 | [('Rated 4.0', 'RATED\n Great food and proper... | []        | Buffet |
| 4 | [('Rated 4.0', 'RATED\n Very good restaurant ... | []        | Buffet |

|   | city         |
|---|--------------|
| 0 | Banashankari |

```
1 Banashankari
2 Banashankari
3 Banashankari
4 Banashankari
```

```
[24]: #Computing Mean rating
restaurants=list(zomato['name'].unique())
zomato['Mean_rating']=0

for i in range(len(restaurants)):
    ↪zomato['Mean_rating'][zomato['name']==restaurants[i]]=zomato['rate'][zomato['name']==restaurants[i]].mean()
```

```
[25]: from sklearn.preprocessing import MinMaxScaler
scaler=MinMaxScaler(feature_range=(1,5))
zomato[['Mean_rating']]=scaler.fit_transform(zomato[['Mean_rating']]).round(2)
```

```
[26]: #Lower casing
zomato['reviews_list']=zomato['reviews_list'].str.lower()
```

```
[27]: import string
PUNCT_TO_REMOVE=string.punctuation
def remove_punctuation(text):
    return text.translate(str.maketrans('', '', PUNCT_TO_REMOVE))

zomato['reviews_list']=zomato['reviews_list'].apply(lambda text: ↪
    ↪remove_punctuation(text))
```

```
[28]: import nltk
nltk.download('stopwords')
```

```
[nltk_data] Downloading package stopwords to
[nltk_data] C:\Users\admin\AppData\Roaming\nltk_data...
[nltk_data] Package stopwords is already up-to-date!
```

```
[28]: True
```

```
[29]: #Removal of stopwords
from nltk.corpus import stopwords
STOPWORDS= set(stopwords.words('english'))
def remove_stopwords(text):
    return ''.join([word for word in str(text).split() if word not in ↪
    ↪STOPWORDS])

zomato['reviews_list']= zomato['reviews_list'].apply(lambda text: ↪
    ↪remove_stopwords(text))
```

```
[30]: #Removal of Urls
def remove_urls(text):
    url_pattern=re.compile(r'https?://\S+|www\.\S+')
    return url_pattern.sub(r'',text)

zomato['reviews_list']= zomato['reviews_list'].apply(lambda text:
    ↪remove_urls(text))
```

```
[31]: zomato[['reviews_list','cuisines']].sample(10)
```

```
[31]:
```

|       | reviews_list \                                     | cuisines                              |
|-------|--|---------------------------------------|
| 40107 | rated40ratednwentssaturdaylunchorderedvegchicke... | Biryani, North Indian, Kebab          |
| 15040 | rated50ratednonebestindoripohasbangaloredefin...   | Street Food, Fast Food                |
| 6098  | rated50ratednfoodtasteyummyqualityquantitywort...  | North Indian, Bengali, Oriya          |
| 26265 | rated40ratednplacenarrowstreetindiranagarfishc...  | Oriya, North Indian, Bengali, Chinese |
| 8872  | rated50ratednutterlydeliciousbengalifoodordere...  | Bengali, North Indian                 |
| 39280 | rated40ratedngoodfoodbudgetorderedhomedelivery...  | Lebanese                              |
| 792   | rated20ratedn15tbhgobichillmushroomchilliuptom...  | Chinese, North Indian                 |
| 32110 |  | South Indian                          |
| 30530 | rated50ratedn5starsnamequalityquantityicecream...  | Desserts, Fast Food, Beverages        |
| 9547  | rated40ratednhealthyfreshprovidegoodoptionsple...  | Mexican, Fast Food                    |

```
[32]: ##Restaurant Names

restaurant_names = list(zomato['name'].unique())
def get_top_words(column,top_nu_of_words,nu_of_word):
    vec=CountVectorizer(ngram_range=nu_of_word,stop_words='english')
    bag_of_words=vec.fit_transform(column)
    sum_words=bag_of_words.sum(axis=0)
    words_freq=[(word,sum_words[0,idx]) for word,idx in vec.vocabulary_.items()]
    words_freq=sorted(words_freq,key=lambda x:x[1],reverse=True)
    return words_freq[:top_nu_of_words]
```

```
[33]: zomato=zomato.drop(['address','rest_type','type','menu_item','votes'],axis=1)
```

```
[34]: df_percent= zomato.sample(frac=0.5)
```

```
[35]: df_percent.set_index('name',inplace=True)
df_percent
```

```
[35]:
```

|  | online_order | book_table | \ |
|--|--------------|------------|---|
| name                                       |              |            |   |
| 55 Wall Street                             | False        | True       |   |
| Chili'S American Grill & Bar               | True         | True       |   |
| The Terminus - The Oterra                  | False        | True       |   |
| Shanthi Sagar                              | True         | False      |   |
| Hotel Salala                               | True         | False      |   |
| ...  | ...          | ...        |   |
| Hotel Devanand Kerala Restaurant           | True         | False      |   |
| Cafã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã ... | True         | False      |   |
| Foxtrot - House Of Subculture              | False        | True       |   |
| Cafã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã ... | False        | False      |   |
| I-Bar - The Park Bangalore                 | False        | False      |   |

  

|  | rate | \ |
|--|------|---|
| name                                       |      |   |
| 55 Wall Street                             | 3.9  |   |
| Chili'S American Grill & Bar               | 4.6  |   |
| The Terminus - The Oterra                  | 4.0  |   |
| Shanthi Sagar                              | 4.0  |   |
| Hotel Salala                               | 3.6  |   |
| ...  | ...  |   |
| Hotel Devanand Kerala Restaurant           | 3.4  |   |
| Cafã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã ... | 4.1  |   |
| Foxtrot - House Of Subculture              | 4.4  |   |
| Cafã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã ... | 3.2  |   |
| I-Bar - The Park Bangalore                 | 3.8  |   |

  

|  | location              | \ |
|--|-----------------------|---|
| name                                       |                       |   |
| 55 Wall Street                             | JP Nagar              |   |
| Chili'S American Grill & Bar               | Bellandur             |   |
| The Terminus - The Oterra                  | Electronic City       |   |
| Shanthi Sagar                              | Ulsoor                |   |
| Hotel Salala                               | Brookefield           |   |
| ...  | ...                   |   |
| Hotel Devanand Kerala Restaurant           | CV Raman Nagar        |   |
| Cafã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã ... | Richmond Road         |   |
| Foxtrot - House Of Subculture              | Koramangala 3rd Block |   |
| Cafã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã ... | Koramangala 4th Block |   |
| I-Bar - The Park Bangalore                 | MG Road               |   |



| cuisines \                                 |                             |
|--|-----------------------------|
| name                                       |                             |
| 55 Wall Street                             | Finger Food, North          |
| Indian, Chinese                            |                             |
| Chili'S American Grill & Bar               | American, Tex-              |
| Mex, Burger, BBQ                           |                             |
| The Terminus - The Oterra                  | Finger                      |
| Food, Continental                          |                             |
| Shanthi Sagar                              | South Indian, North Indian, |
| Chinese, Juices                            |                             |
| Hotel Salala                               | North Indian, South Indian, |
| Chinese, Biryani                           |                             |
| ...  |                             |
| ...  |                             |
| Hotel Devanand Kerala Restaurant           |                             |
| Kerala                                     |                             |
| Cafã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã ... | BBQ, Continental, Burger,   |
| Wraps, Pizza, Cafe                         |                             |
| Foxtrot - House Of Subculture              | Cafe, American,             |
| Asian, North Indian                        |                             |
| Cafã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã ... | Cafe,                       |
| American, European                         |                             |
| I-Bar - The Park Bangalore                 | North Indian,               |
| Chinese, Mediterranean                     |                             |

| cost \                                     |       |
|--|-------|
| name                                       |       |
| 55 Wall Street                             | 1.3   |
| Chili'S American Grill & Bar               | 1.8   |
| The Terminus - The Oterra                  | 2.5   |
| Shanthi Sagar                              | 250.0 |
| Hotel Salala                               | 400.0 |
| ...  | ...   |
| Hotel Devanand Kerala Restaurant           | 300.0 |
| Cafã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã ... | 700.0 |
| Foxtrot - House Of Subculture              | 1.0   |
| Cafã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã ... | 600.0 |
| I-Bar - The Park Bangalore                 | 3.0   |

| reviews_list \                                    |  |
|---|--|
| name  |  |
| 55 Wall Street                                    |  |
| rated50ratedntwowaysenjoyonefloordiscenjoylive... |  |
| Chili'S American Grill & Bar                      |  |
| rated40ratedngoodtimesspandherenwecomefriendsf... |  |
| The Terminus - The Oterra                         |  |
| rated50ratednexcelentplacebitfarmaincityuvisi...  |  |

Shanthi Sagar  
 rated10ratednpaneermasalapaneerportantthingadd...  
 Hotel Salala  
 rated50ratedngoodrestaurantlovekeraliancuisine...  
 ...  
 ...  
 Hotel Devanand Kerala Restaurant  
 rated10ratednneworstkeralafoodorderedswiggypu...  
 Cafã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã ...  
 rated40ratednofficefrndsorderedminifalafelpita...  
 Foxtrot - House Of Subculture  
 rated50ratednambience55nlocation55nfood55nserv...  
 Cafã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã ...  
 rated30ratednorderedhvneverreceivedorderquickl...  
 I-Bar - The Park Bangalore  
 rated40ratednonebestplacesbangalorengoodplaceh...

| name   | city \                |
|--|-----------------------|
| 55 Wall Street                                 | BTM                   |
| Chili'S American Grill & Bar                   | Sarjapur Road         |
| The Terminus - The Oterra                      | Electronic City       |
| Shanthi Sagar                                  | Residency Road        |
| Hotel Salala                                   | Marathahalli          |
| ...  | ...                   |
| Hotel Devanand Kerala Restaurant               | Old Airport Road      |
| Cafã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã ... | Lavelle Road          |
| Foxtrot - House Of Subculture                  | Koramangala 5th Block |
| Cafã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã ... | Koramangala 7th Block |
| I-Bar - The Park Bangalore                     | MG Road               |

| name   | Mean_rating |
|--|-------------|
| 55 Wall Street                                 | 3.71        |
| Chili'S American Grill & Bar                   | 4.70        |
| The Terminus - The Oterra                      | 3.84        |
| Shanthi Sagar                                  | 3.44        |
| Hotel Salala                                   | 3.39        |
| ...  | ...         |
| Hotel Devanand Kerala Restaurant               | 3.06        |
| Cafã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã ... | 3.97        |
| Foxtrot - House Of Subculture                  | 4.35        |
| Cafã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã ... | 2.81        |
| I-Bar - The Park Bangalore                     | 3.58        |

[20618 rows x 9 columns]

```
[36]: indices=pd.Series(df_percent.index)
indices
```

```
[36]: 0                    55 Wall Street
1          Chili'S American Grill & Bar
2          The Terminus - The Oterra
3          Shanthi Sagar
4          Hotel Salala

...
20613          Hotel Devanand Kerala Restaurant
20614  Cafã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã...
20615          Foxtrot - House Of Subculture
20616  Cafã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã Ã...
20617          I-Bar - The Park Bangalore
Name: name, Length: 20618, dtype: object
```

```
[ ]: from sklearn.metrics.pairwise import linear_kernel
from sklearn.feature_extraction.text import CountVectorizer
from sklearn.feature_extraction.text import TfidfVectorizer

#Creating Tf-IDF matrix
tfidf = TfidfVectorizer(analyzer='word', ngram_range=(1, 2), min_df=0,
↳stop_words='english')
tfidf_matrix=tfidf.fit_transform(df_percent['reviews_list'])

cosine_similarities=linear_kernel(tfidf_matrix,tfidf_matrix)
```

#Now the last step for creating a Restaurant Recommendation System is to write a function that will recommend restaurants:

```
[39]: def recommend(name, cosine_similarities = cosine_similarities):

    # Create a list to put top restaurants
    recommend_restaurant = []

    # Find the index of the hotel entered
    idx = indices[indices == name].index[0]

    # Find the restaurants with a similar cosine-sim value and order them from
↳bigges number
    score_series = pd.Series(cosine_similarities[idx]).
↳sort_values(ascending=False)

    # Extract top 30 restaurant indexes with a similar cosine-sim value
    top30_indexes = list(score_series.iloc[0:31].index)

    # Names of the top 30 restaurants
```

```

for each in top30_indexes:
    recommend_restaurant.append(list(df_percent.index)[each])

# Creating the new data set to show similar restaurants
df_new = pd.DataFrame(columns=['cuisines', 'Mean Rating', 'cost'])

# Create the top 30 similar restaurants with some of their columns
for each in recommend_restaurant:
    df_new = df_new.append(pd.DataFrame(df_percent[['cuisines', 'Mean_
→Rating', 'cost']][df_percent.index == each].sample()))

    # Drop the same named restaurants and sort only the top 10 by the highest_
→rating
    df_new = df_new.drop_duplicates(subset=['cuisines', 'Mean Rating', 'cost'],_
→keep=False)
    df_new = df_new.sort_values(by='Mean Rating', ascending=False).head(10)

    print('TOP %s RESTAURANTS LIKE %s WITH SIMILAR REVIEWS: ' %_
→(str(len(df_new)), name))

    return df_new
#recommend('Pai Vihar')

```

[ ]: