DATA SCIENCE

Project: Asylum seekers/ Refugee settlement analysis

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Dated: May 10th 2020

Introduction

Refugees movement is always main concern for all the countries across globe. UN High Commissioner for Refugees (UNHCR) gather all data of movement of displaced persons (asylum seekers, refugees, internally displaced persons (IDP), stateless). Most of the researchers/scientists use historical data to find the various factors and parameters cause such movements across globe.

I am using below data sets from UNHCR that contains the following details

1. Country of origin
2. Country of asylum/refugee (destination)
3. Year
4. Count
5. Rejected/ Closed cases in each year
6. Total applied cases in each year

Data files

asylum_seeker_detail.csv

asylum_person_detail.csv

Prerequisite

Libraries

1. Pandas
2. Numpy
3. Matplotlib
4. Seaborn
5. Python

Interactive console

1. Jupyter Notebook (iPython)

Import required libraries

```
import numpy as np
import pandas as pd
from pandas import Series, DataFrame
import seaborn as sns
from matplotlib import pyplot as plt
```

DataFrames

	Country / territory of asylum/residence	Origin	Year	Month	Value
0	Australia	Afghanistan	1999	January	8
1	Australia	Afghanistan	1999	February	10
2	Australia	Afghanistan	1999	March	25
3	Australia	Afghanistan	1999	April	25
4	Australia	Afghanistan	1999	May	7

	Year	Country / territory of asylum/residence	Tota pending start-year	Applied during year	Rejected	Otherwise closed	Total decisions	Total pending end-year
0	2000	Zimbabwe	0	5	0	0	5	0
1	2000	South Africa	8	0	0	0	NaN	8
2	2000	Uzbekistan	265	2156	112	327	1186	1235
3	2000	United States of America	196	225	31	68	250	171
4	2000	United States of America	193	218	51	40	273	150

Purpose

What are the most frequent destination countries for refugees?

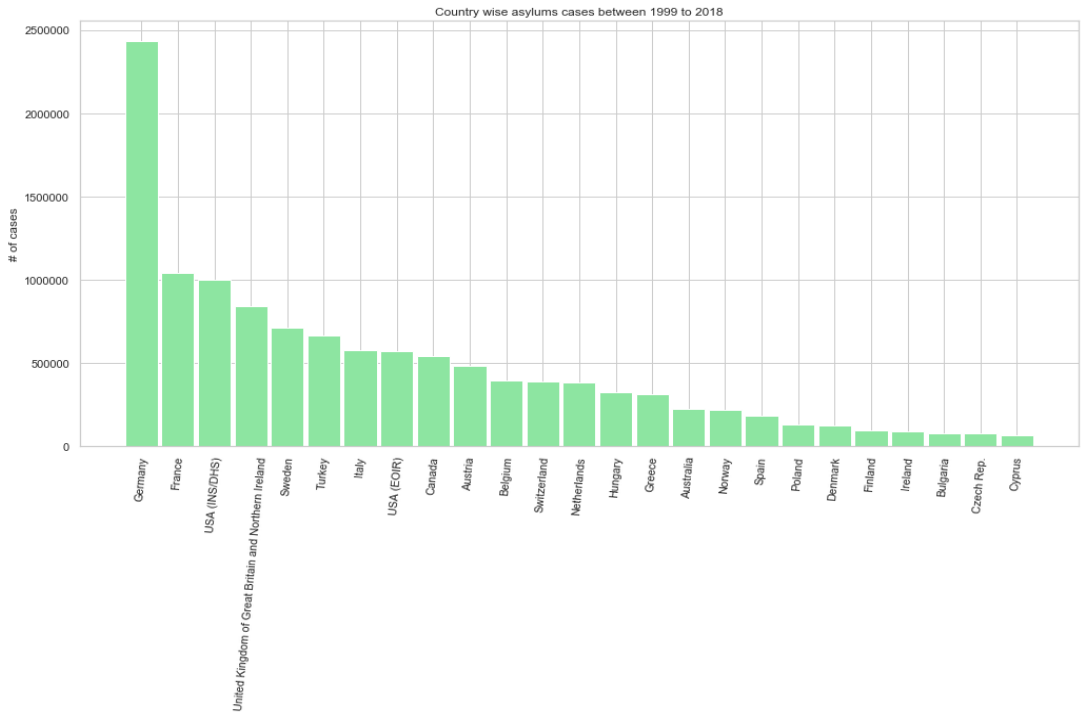
Countries from where most of the refugee/asylum seeker originated?

Trends among refugees originated from war affected vs stable countries?

Refugees/asylum seeker from India, their acceptance or rejection rate by destination countries.

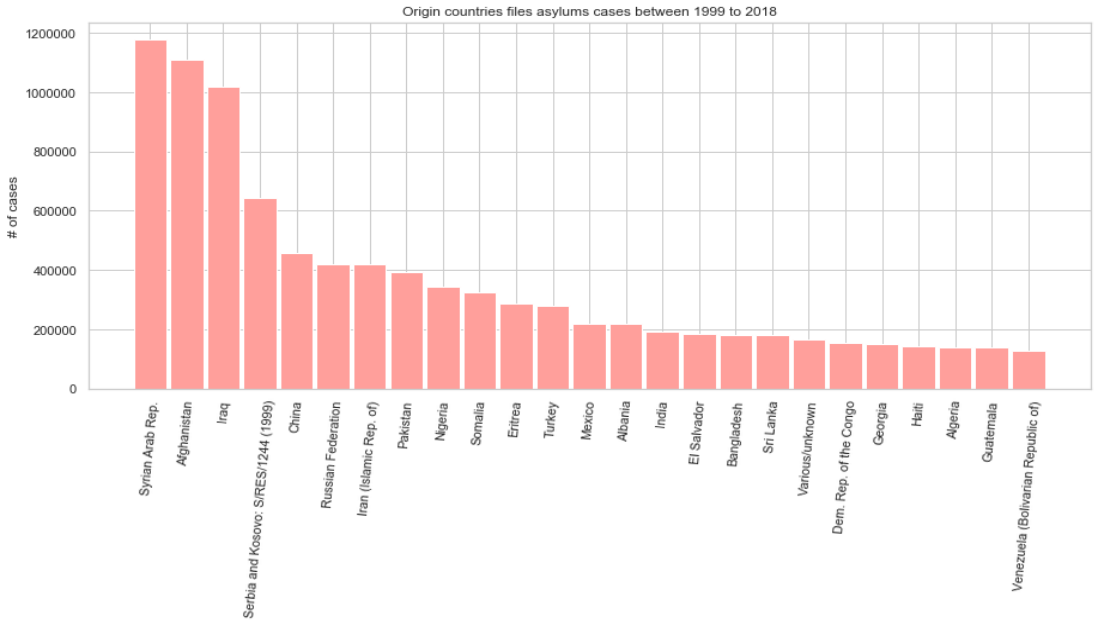
Destination Countries

Below graph shows the first 25 countries where most asylum cases have been filed between 1999 to 2018. Germany stands at number one with 24 million cases has been filed during this period.



Origin countries

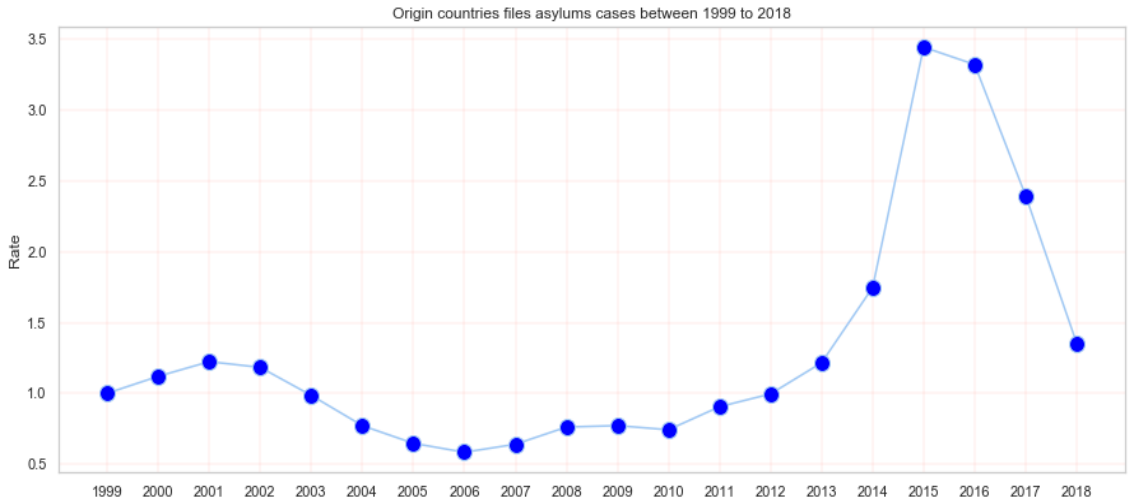
People from different countries apply for asylum, most of those countries are war effected, developing, minority persecution and has very low basic resources for population. Graph will depict the first 25 countries of origin from there most asylum cases has been applied.



Trends in Refugees movement

As per last 20 year of data, Syria, Afghanistan and Iraq were war affected countries so it is natural that most of the people migrated from these countries for asylum. However, there are few stable countries like China and India.

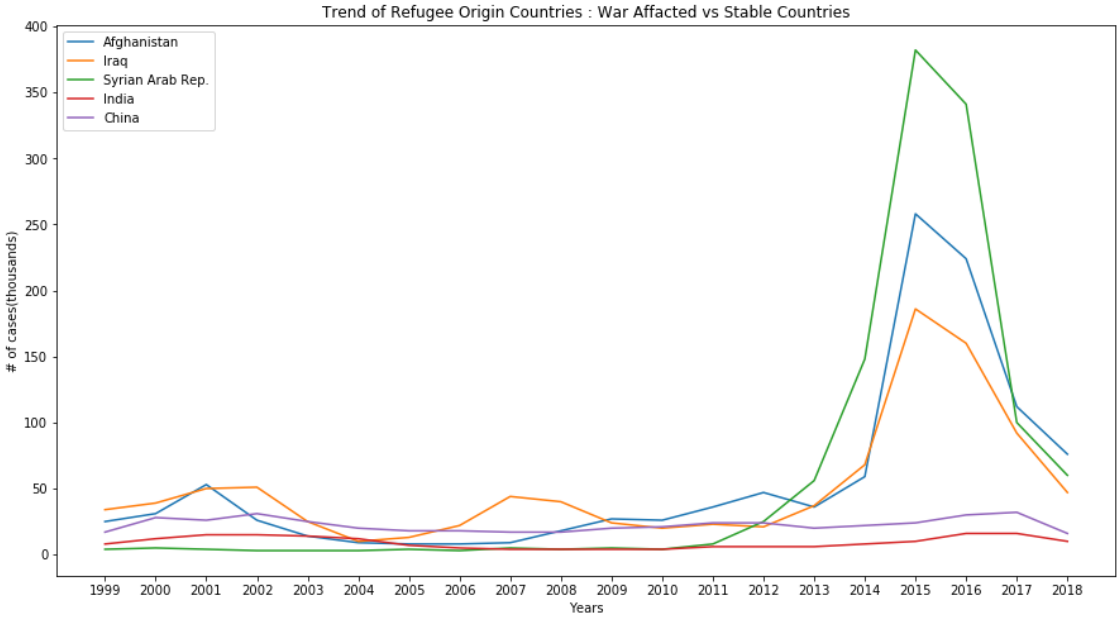
Trend of refugee origin during period of approx. 20 year between 1999 to 2018



We can see a big spike between 2014 to 2017 when most of the refugee originated from war affected countries, on the other hand there is a consistent flow from stable countries

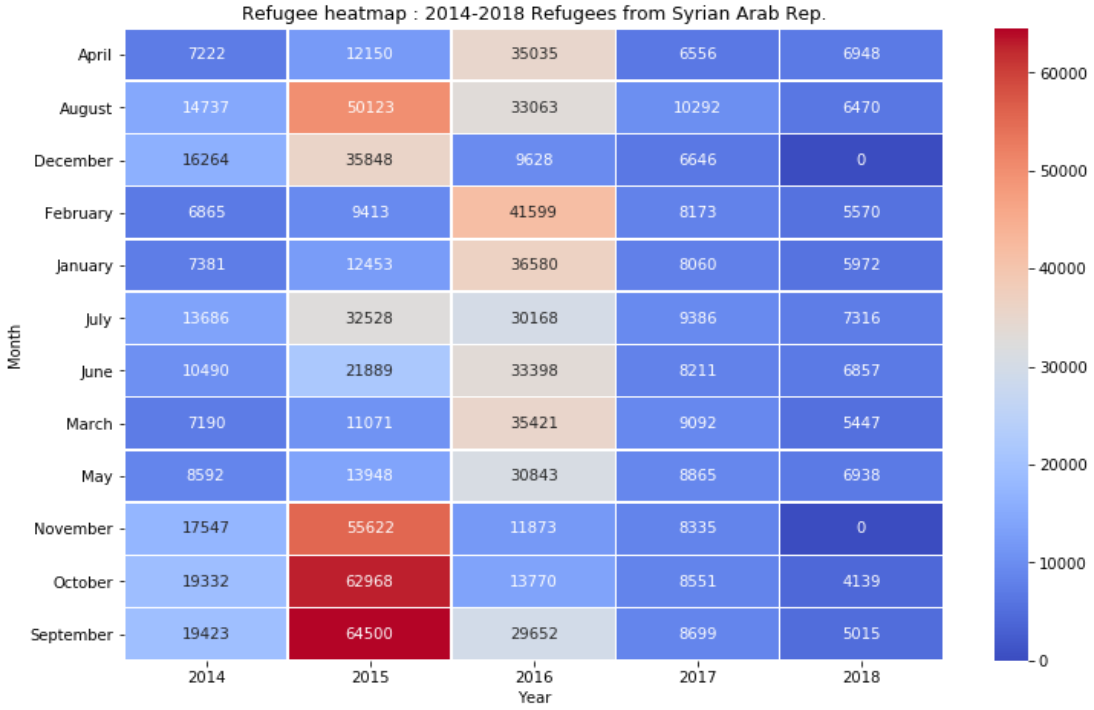
I think this spike was during war in Syria (between 2013 to 2016) most of the countries temporarily open their doors for refugees.

Trends in Refugees of war affected vs stable countries

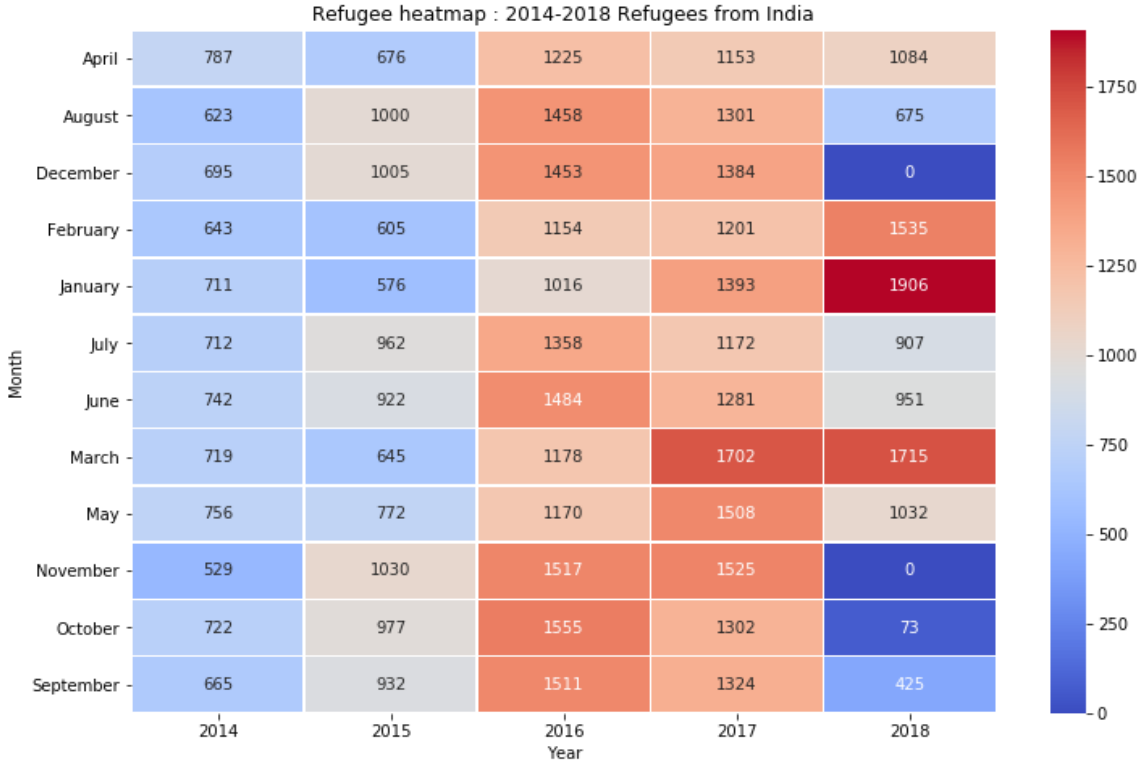


Heat map:

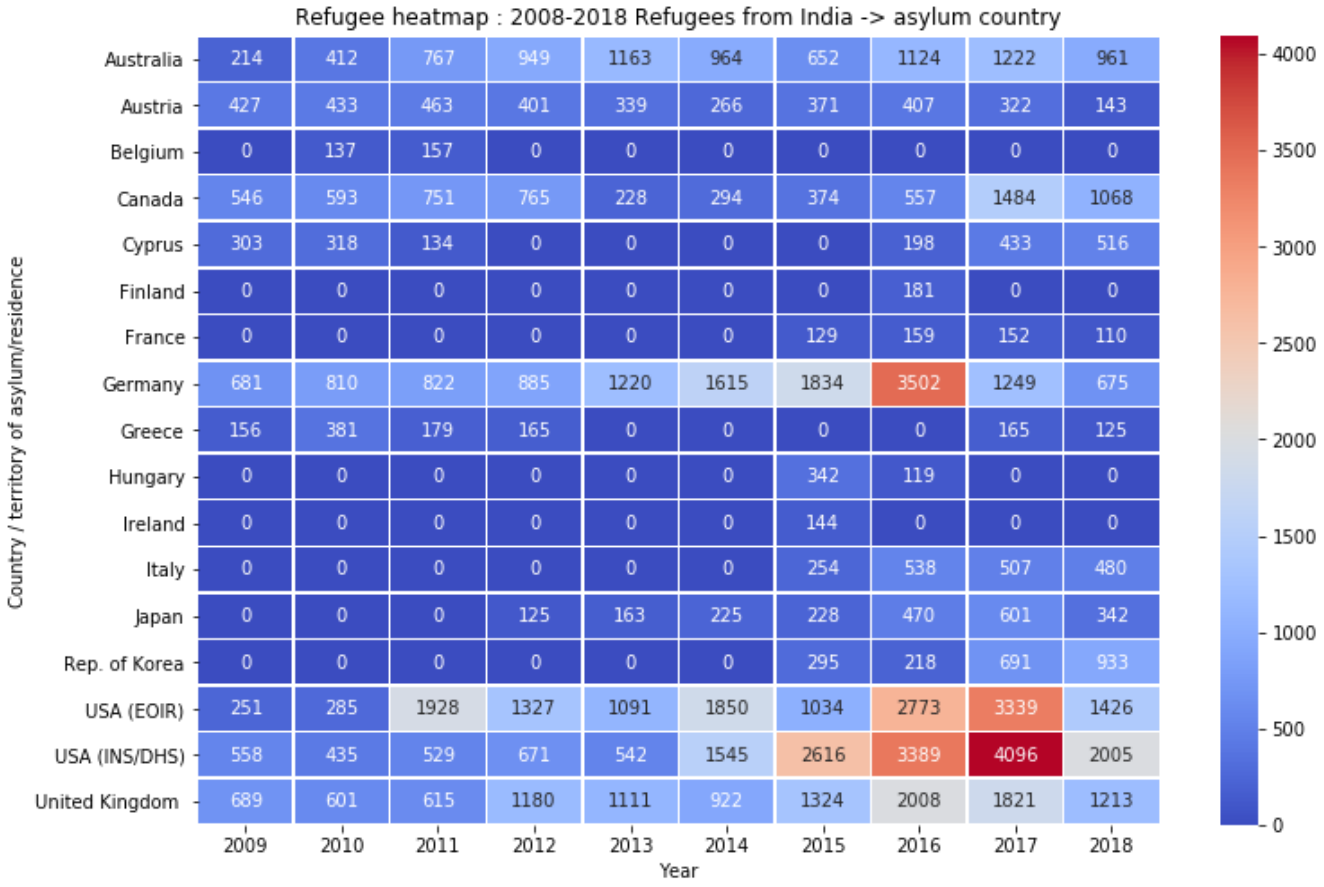
Syria heatmap between 2014 to 2018



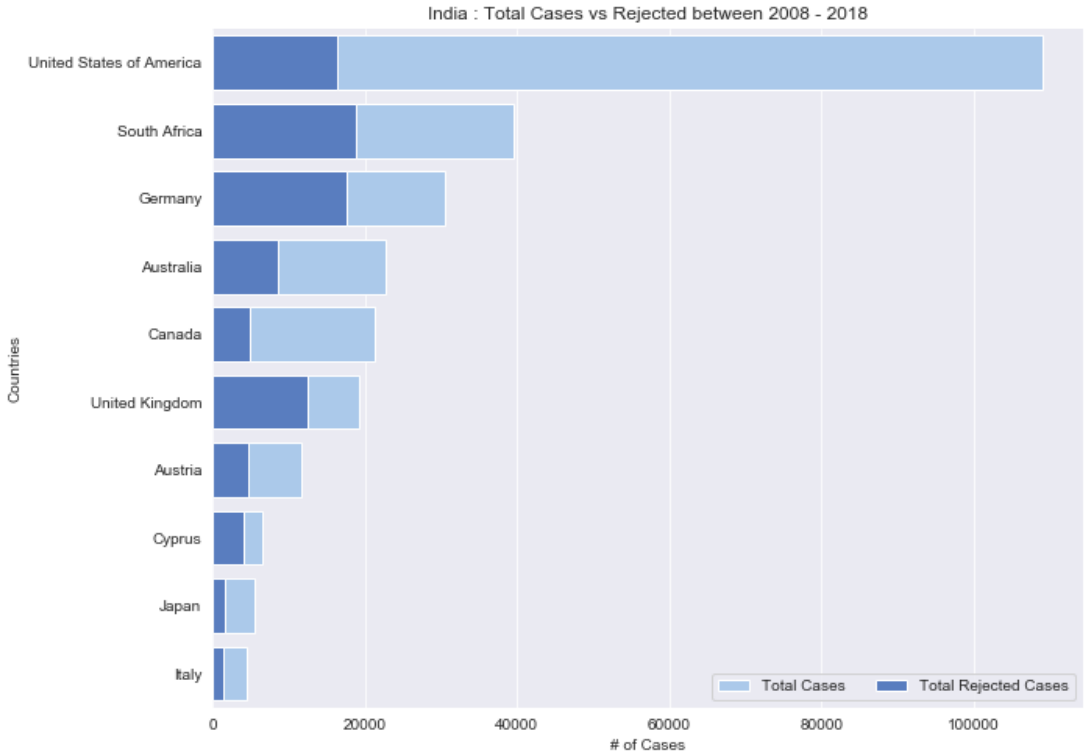
India heatmap between 2014-2018



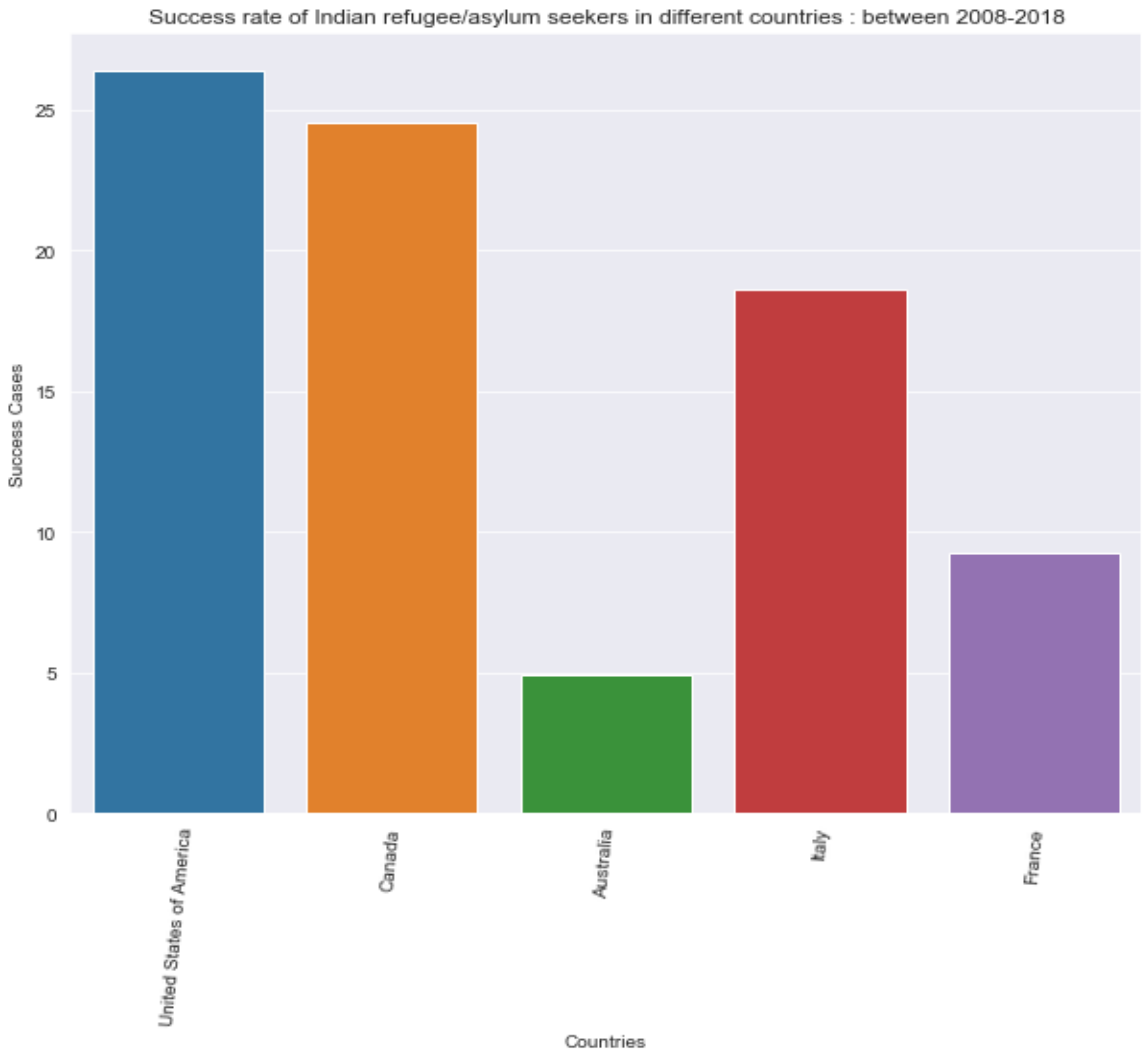
India’s country wise heat map between 2008-2018



India’s country wise rejected vs total asylum/refugee cases



Destination country wise success rate of Indian refugees/asylum seeker between 2008-2018



Snapshot of code

```
#reading file
as_data = pd.read_csv('Asylum Data/asylumdata.csv',low_memory=False)

aslymData_cntry=aslymData.groupby('Country / territory of asylum/residence')['Value'].sum()
aslymData_cntry2 = aslymData_cntry.sort_values(ascending=False)[:25]

bars = aslymData_cntry2.index
y_pos = np.arange(len(bars))

# Ploting graph
fig = plt.figure(figsize=(17,8))
plt.bar(y_pos,aslymData_cntry2, color='g',align='center', width=0.9)
```

```
plt.title("Country wise asylums cases between 1999 to 2018")
plt.xticks(y_pos, bars,rotation=85)
plt.ylabel("# of cases")
plt.show()

#Ploting graph
bars = aslymData_orig_ml.index
y_pos = np.arange(len(bars))

fig = plt.figure(figsize=(15,6))
plt.bar(y_pos,aslymData_orig_ml, color='r',align='center', width=0.9)
plt.title("Origin countries files asylums cases between 1999 to 2018")
plt.xticks(y_pos, bars,rotation=85)
plt.ylabel("# of cases")
plt.show()

#Ploting another graph
fig = plt.figure(figsize=(15,6))
plt.grid(color='r', linestyle='-', linewidth=.2)
plt.plot(dyear,yearwise_per, color='b',marker='o',
    markerfacecolor='blue', markersize=12)
plt.title("Origin countries files asylums cases between 1999 to 2018")
plt.ylabel("Rate")
plt.show()



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fig = plt.figure(figsize=(10,8))

ax = sns.barplot(x=asylum_all_selected2.index, y="Succ_rate", data=asylum_all_selected2)

ax.set_xticklabels(labels=asylum_all_selected2.index, rotation=85)
ax.set_title("Success rate of Indian refugee/asylum seekers in different countries : between 2008-
2018")
ax.set_ylabel("Success Cases")
ax.set_xlabel("Countries")
```