internship-task-4

May 11, 2022

1 internship-task-4

Use the "Run" button to execute the code.

[69]:
```
!pip install jovian --upgrade --quiet
```

[70]:
```
import jovian
```

[71]:
```
# Execute this to save new versions of the notebook
jovian.commit(project="internship-task-4")
```

```
<IPython.core.display.Javascript object>
```

```
[jovian] Updating notebook "parishabhatia12/internship-task-4" on
https://jovian.ai
[jovian] Committed successfully! https://jovian.ai/parishabhatia12/internship-
task-4
```

[71]:
```
'https://jovian.ai/parishabhatia12/internship-task-4'
```

[6]:
```
import pandas as pd
df = pd.read_csv('globalTerrorism.csv')
```

```
/opt/conda/lib/python3.9/site-packages/IPython/core/interactiveshell.py:3441:
DtypeWarning: Columns (4,6,31,33,61,62,63,76,79,90,92,94,96,114,115,121) have
mixed types.Specify dtype option on import or set low_memory=False.
  exec(code_obj, self.user_global_ns, self.user_ns)
```

[7]:
```
df
```

[7]:

	eventid	iyear	imonth	iday	approxdate	extended	resolution	\
0	1.970000e+11	1970	7	2	NaN	0	NaN	
1	1.970000e+11	1970	0	0	NaN	0	NaN	
2	1.970000e+11	1970	1	0	NaN	0	NaN	
3	1.970000e+11	1970	1	0	NaN	0	NaN	
4	1.970000e+11	1970	1	0	NaN	0	NaN	
…	…	…	…	…	…	…	…	
181686	2.020000e+11	2017	12	31	NaN	0	NaN	
181687	2.020000e+11	2017	12	31	NaN	0	NaN	

```
181688  2.020000e+11   2017      12    31        NaN         0        NaN
181689  2.020000e+11   2017      12    31        NaN         0        NaN
181690  2.020000e+11   2017      12    31        NaN         0        NaN

        country         country_txt  region  … addnotes  \
0            58  Dominican Republic       2  …      NaN
1           130              Mexico       1  …      NaN
2           160         Philippines       5  …      NaN
3            78              Greece       8  …      NaN
4           101               Japan       4  …      NaN
…             …                   …     …  …       …
181686      182             Somalia      11  …      NaN
181687      200               Syria      10  …      NaN
181688      160         Philippines       5  …      NaN
181689       92               India       6  …      NaN
181690      160         Philippines       5  …      NaN

                                                   scite1  \
0                                                     NaN
1                                                     NaN
2                                                     NaN
3                                                     NaN
4                                                     NaN
…                                                       …
181686  "Somalia: Al-Shabaab Militants Attack Army Che…
181687  "Putin's 'victory' in Syria has turned into a …
181688  "Maguindanao clashes trap tribe members," Phil…
181689  "Trader escapes grenade attack in Imphal," Bus…
181690  "Security tightened in Cotabato following IED …

                                                   scite2  \
0                                                     NaN
1                                                     NaN
2                                                     NaN
3                                                     NaN
4                                                     NaN
…                                                       …
181686  "Highlights: Somalia Daily Media Highlights 2 …
181687  "Two Russian soldiers killed at Hmeymim base i…
181688                                                NaN
181689                                                NaN
181690  "Security tightened in Cotabato City," Manila …

                                                   scite3  \
0                                                     NaN
1                                                     NaN
2                                                     NaN
```

```
3                                                      NaN
4                                                      NaN
…                                                      …
181686  "Highlights: Somalia Daily Media Highlights 1 …
181687  "Two Russian servicemen killed in Syria mortar…
181688                                                 NaN
181689                                                 NaN
181690                                                 NaN

                       dbsource  INT_LOG  INT_IDEO INT_MISC INT_ANY  related
0                          PGIS        0         0        0       0      NaN
1                          PGIS        0         1        1       1      NaN
2                          PGIS       -9        -9        1       1      NaN
3                          PGIS       -9        -9        1       1      NaN
4                          PGIS       -9        -9        1       1      NaN
…                           …      …        …       …      …       …
181686  START Primary Collection        0         0        0       0      NaN
181687  START Primary Collection       -9        -9        1       1      NaN
181688  START Primary Collection        0         0        0       0      NaN
181689  START Primary Collection       -9        -9        0      -9      NaN
181690  START Primary Collection       -9        -9        0      -9      NaN

[181691 rows x 135 columns]
```

[13]:
```
selected_columns =␣
↪['country_txt','region_txt','provstate','city','attacktype1_txt','targtype1_txt','weaptype1
```

[14]:
```
filter_df = df[selected_columns].copy()
```

[15]:
```
filter_df
```

[15]:
```
               country_txt                   region_txt        provstate  \
0       Dominican Republic  Central America & Caribbean              NaN
1                   Mexico                North America          Federal
2              Philippines               Southeast Asia           Tarlac
3                   Greece               Western Europe           Attica
4                    Japan                    East Asia          Fukouka
…                     …                            …              …
181686             Somalia          Sub-Saharan Africa  Middle Shebelle
181687               Syria  Middle East & North Africa         Lattakia
181688         Philippines               Southeast Asia      Maguindanao
181689               India                   South Asia          Manipur
181690         Philippines               Southeast Asia      Maguindanao

                 city                attacktype1_txt  \
0       Santo Domingo                  Assassination
1         Mexico city  Hostage Taking (Kidnapping)
```

```
2             Unknown                   Assassination
3              Athens               Bombing/Explosion
4             Fukouka  Facility/Infrastructure Attack
…                 …                             …
181686  Ceelka Geelow                   Armed Assault
181687         Jableh               Bombing/Explosion
181688       Kubentog  Facility/Infrastructure Attack
181689         Imphal               Bombing/Explosion
181690  Cotabato City               Bombing/Explosion

                     targtype1_txt weaptype1_txt
0       Private Citizens & Property       Unknown
1           Government (Diplomatic)       Unknown
2               Journalists & Media       Unknown
3           Government (Diplomatic)    Explosives
4           Government (Diplomatic)    Incendiary
…                               …           …
181686                   Military      Firearms
181687                   Military    Explosives
181688  Private Citizens & Property    Incendiary
181689         Government (General)    Explosives
181690                    Unknown    Explosives

[181691 rows x 7 columns]
```

[19]:
```
filter_df.country_txt.nunique()
```

[19]: 205

[20]:
```
filter_df.attacktype1_txt.nunique()
```

[20]: 9

[22]:
```
filter_df.weaptype1_txt.nunique()
```

[22]: 12

[23]:
```
filter_df.targtype1_txt.nunique()
```

[23]: 22

[24]:
```
list = df['country_txt'].tolist()
res = []
for i in list:
    if i not in res:
        res.append(i)
print(str(res))
```

```
['Dominican Republic', 'Mexico', 'Philippines', 'Greece', 'Japan', 'United
States', 'Uruguay', 'Italy', 'East Germany (GDR)', 'Ethiopia', 'Guatemala',
'Venezuela', 'West Germany (FRG)', 'Switzerland', 'Jordan', 'Spain', 'Brazil',
'Egypt', 'Argentina', 'Lebanon', 'Ireland', 'Turkey', 'Paraguay', 'Iran',
'United Kingdom', 'Colombia', 'Bolivia', 'Nicaragua', 'Netherlands', 'Belgium',
'Canada', 'Australia', 'Pakistan', 'Zambia', 'Sweden', 'Costa Rica', 'South
Yemen', 'Cambodia', 'Israel', 'Poland', 'Taiwan', 'Panama', 'Kuwait', 'West Bank
and Gaza Strip', 'Austria', 'Czechoslovakia', 'India', 'France', 'South
Vietnam', 'Brunei', 'Zaire', "People's Republic of the Congo", 'Portugal',
'Algeria', 'El Salvador', 'Thailand', 'Haiti', 'Sudan', 'Morocco', 'Cyprus',
'Myanmar', 'Afghanistan', 'Peru', 'Chile', 'Honduras', 'Yugoslavia', 'Ecuador',
'New Zealand', 'Malaysia', 'Singapore', 'Botswana', 'Jamaica', 'Chad', 'North
Yemen', 'Andorra', 'Syria', 'South Korea', 'United Arab Emirates', 'South
Africa', 'Kenya', 'Iraq', 'Somalia', 'Tanzania', 'Sri Lanka', 'Namibia',
'Bahamas', 'Nigeria', 'Barbados', 'Trinidad and Tobago', 'Bangladesh', 'Angola',
'Mauritania', 'Saudi Arabia', 'Djibouti', 'Indonesia', 'Malta', 'Rhodesia',
'Soviet Union', 'Denmark', 'Western Sahara', 'Guyana', 'Mozambique', 'Tunisia',
'Uganda', 'Norway', 'Lesotho', 'Gabon', 'Libya', 'Bahrain', 'Hong Kong',
'Senegal', 'Zimbabwe', 'Guinea', 'Grenada', 'New Hebrides', 'Belize',
'Guadeloupe', 'Martinique', 'Vatican City', 'Albania', 'Central African
Republic', 'Seychelles', 'Dominica', 'Qatar', 'Bulgaria', 'Suriname',
'Swaziland', 'Luxembourg', 'Iceland', 'French Guiana', 'Falkland Islands',
'Burkina Faso', 'New Caledonia', 'Romania', 'Niger', 'Nepal', 'Togo', 'Finland',
'Fiji', 'Ghana', 'Maldives', 'Mauritius', 'Hungary', 'Laos', 'Papua New Guinea',
'China', 'Liberia', 'Republic of the Congo', 'Mali', 'Germany', 'Yemen',
'Rwanda', 'Sierra Leone', 'Cameroon', 'Cuba', 'Croatia', 'Georgia',
'Azerbaijan', 'Madagascar', 'Lithuania', 'Burundi', 'Ukraine', 'Moldova',
'Armenia', 'Russia', 'Ivory Coast', 'Kazakhstan', 'Antigua and Barbuda',
'Bosnia-Herzegovina', 'Equatorial Guinea', 'Tajikistan', 'Malawi', 'Uzbekistan',
'Latvia', 'Estonia', 'Vietnam', 'Comoros', 'Benin', 'Slovak Republic',
'Macedonia', 'Wallis and Futuna', 'Belarus', 'Czech Republic', 'Slovenia',
'Gambia', 'North Korea', 'Eritrea', 'St. Kitts and Nevis', 'French Polynesia',
'Macau', 'Kyrgyzstan', 'Vanuatu', 'Democratic Republic of the Congo', 'Kosovo',
'Solomon Islands', 'East Timor', 'St. Lucia', 'Guinea-Bissau', 'Montenegro',
'International', 'Turkmenistan', 'Serbia-Montenegro', 'Bhutan', 'Serbia', 'South
Sudan']
```

[28]:
```
res.sort()
```

[29]:
```
res
```

[29]:
```
['Afghanistan',
 'Albania',
 'Algeria',
 'Andorra',
 'Angola',
 'Antigua and Barbuda',
```

```
'Argentina',
'Armenia',
'Australia',
'Austria',
'Azerbaijan',
'Bahamas',
'Bahrain',
'Bangladesh',
'Barbados',
'Belarus',
'Belgium',
'Belize',
'Benin',
'Bhutan',
'Bolivia',
'Bosnia-Herzegovina',
'Botswana',
'Brazil',
'Brunei',
'Bulgaria',
'Burkina Faso',
'Burundi',
'Cambodia',
'Cameroon',
'Canada',
'Central African Republic',
'Chad',
'Chile',
'China',
'Colombia',
'Comoros',
'Costa Rica',
'Croatia',
'Cuba',
'Cyprus',
'Czech Republic',
'Czechoslovakia',
'Democratic Republic of the Congo',
'Denmark',
'Djibouti',
'Dominica',
'Dominican Republic',
'East Germany (GDR)',
'East Timor',
'Ecuador',
'Egypt',
'El Salvador',
```

```
'Equatorial Guinea',
'Eritrea',
'Estonia',
'Ethiopia',
'Falkland Islands',
'Fiji',
'Finland',
'France',
'French Guiana',
'French Polynesia',
'Gabon',
'Gambia',
'Georgia',
'Germany',
'Ghana',
'Greece',
'Grenada',
'Guadeloupe',
'Guatemala',
'Guinea',
'Guinea-Bissau',
'Guyana',
'Haiti',
'Honduras',
'Hong Kong',
'Hungary',
'Iceland',
'India',
'Indonesia',
'International',
'Iran',
'Iraq',
'Ireland',
'Israel',
'Italy',
'Ivory Coast',
'Jamaica',
'Japan',
'Jordan',
'Kazakhstan',
'Kenya',
'Kosovo',
'Kuwait',
'Kyrgyzstan',
'Laos',
'Latvia',
'Lebanon',
```

```
'Lesotho',
'Liberia',
'Libya',
'Lithuania',
'Luxembourg',
'Macau',
'Macedonia',
'Madagascar',
'Malawi',
'Malaysia',
'Maldives',
'Mali',
'Malta',
'Martinique',
'Mauritania',
'Mauritius',
'Mexico',
'Moldova',
'Montenegro',
'Morocco',
'Mozambique',
'Myanmar',
'Namibia',
'Nepal',
'Netherlands',
'New Caledonia',
'New Hebrides',
'New Zealand',
'Nicaragua',
'Niger',
'Nigeria',
'North Korea',
'North Yemen',
'Norway',
'Pakistan',
'Panama',
'Papua New Guinea',
'Paraguay',
"People's Republic of the Congo",
'Peru',
'Philippines',
'Poland',
'Portugal',
'Qatar',
'Republic of the Congo',
'Rhodesia',
'Romania',
```

```
'Russia',
'Rwanda',
'Saudi Arabia',
'Senegal',
'Serbia',
'Serbia-Montenegro',
'Seychelles',
'Sierra Leone',
'Singapore',
'Slovak Republic',
'Slovenia',
'Solomon Islands',
'Somalia',
'South Africa',
'South Korea',
'South Sudan',
'South Vietnam',
'South Yemen',
'Soviet Union',
'Spain',
'Sri Lanka',
'St. Kitts and Nevis',
'St. Lucia',
'Sudan',
'Suriname',
'Swaziland',
'Sweden',
'Switzerland',
'Syria',
'Taiwan',
'Tajikistan',
'Tanzania',
'Thailand',
'Togo',
'Trinidad and Tobago',
'Tunisia',
'Turkey',
'Turkmenistan',
'Uganda',
'Ukraine',
'United Arab Emirates',
'United Kingdom',
'United States',
'Uruguay',
'Uzbekistan',
'Vanuatu',
'Vatican City',
```

```
 'Venezuela',
 'Vietnam',
 'Wallis and Futuna',
 'West Bank and Gaza Strip',
 'West Germany (FRG)',
 'Western Sahara',
 'Yemen',
 'Yugoslavia',
 'Zaire',
 'Zambia',
 'Zimbabwe']
```

[16]:
```
import seaborn as sns
import matplotlib
import matplotlib.pyplot as plt
%matplotlib inline

sns.set_style('darkgrid')
matplotlib.rcParams['font.size'] = 14
matplotlib.rcParams['figure.figsize'] = (9,5)
matplotlib.rcParams['figure.facecolor'] = '#00000000'
```

[39]:
```
df_country = filter_df.loc[(df['country_txt']== 'Afghanistan')]
df_country
```

[39]:

	country_txt	region_txt	provstate	city	\
1863	Afghanistan	South Asia	Kabul	Kabul	
7627	Afghanistan	South Asia	Kabul	Kabul	
9156	Afghanistan	South Asia	Ghazni	Ghazni	
9218	Afghanistan	South Asia	Herat	Herat	
31132	Afghanistan	South Asia	Unknown	Unknown	
…	…	…	…	…	
181651	Afghanistan	South Asia	Uruzgan	Khas Uruzgan district	
181673	Afghanistan	South Asia	Nangarhar	Jalalabad	
181676	Afghanistan	South Asia	Logar	Mohammad Agha district	
181683	Afghanistan	South Asia	Faryab	Kohistan district	
181685	Afghanistan	South Asia	Faryab	Maymana	

	attacktype1_txt	targtype1_txt	\
1863	Unknown	Airports & Aircraft	
7627	Hostage Taking (Kidnapping)	Government (Diplomatic)	
9156	Bombing/Explosion	Transportation	
9218	Armed Assault	Tourists	
31132	Unarmed Assault	Private Citizens & Property	
…	…	…	
181651	Unknown	Military	
181673	Bombing/Explosion	Private Citizens & Property	

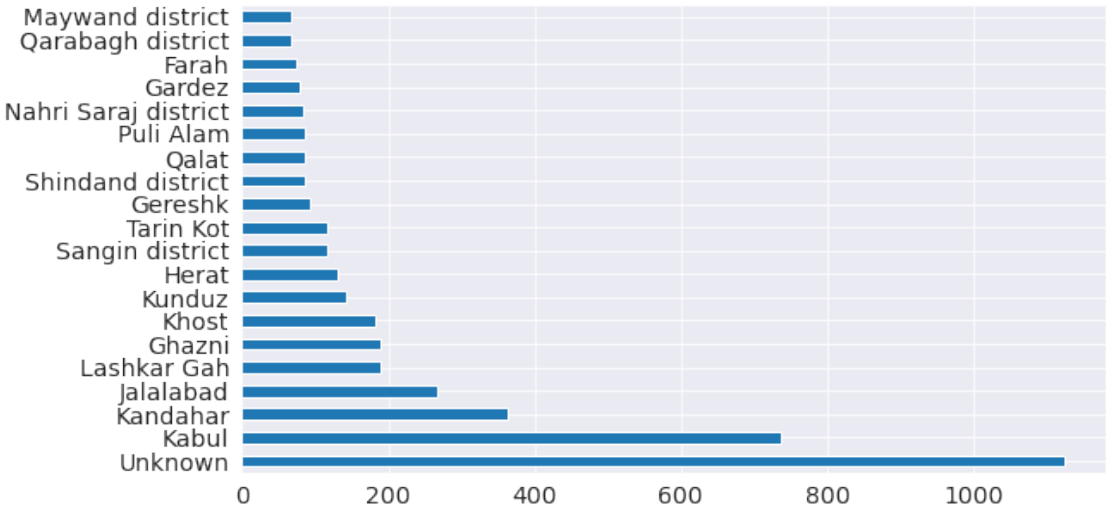
```
181676            Bombing/Explosion                           Police
181683                Armed Assault  Terrorists/Non-State Militia
181685            Bombing/Explosion                       Business

       weaptype1_txt
1863         Unknown
7627         Unknown
9156      Explosives
9218        Firearms
31132       Chemical
…                …
181651       Unknown
181673    Explosives
181676    Explosives
181683      Firearms
181685    Explosives

[12731 rows x 7 columns]
```

[42]:
```
df_country['city'].value_counts()[:20].plot(kind='barh')
```

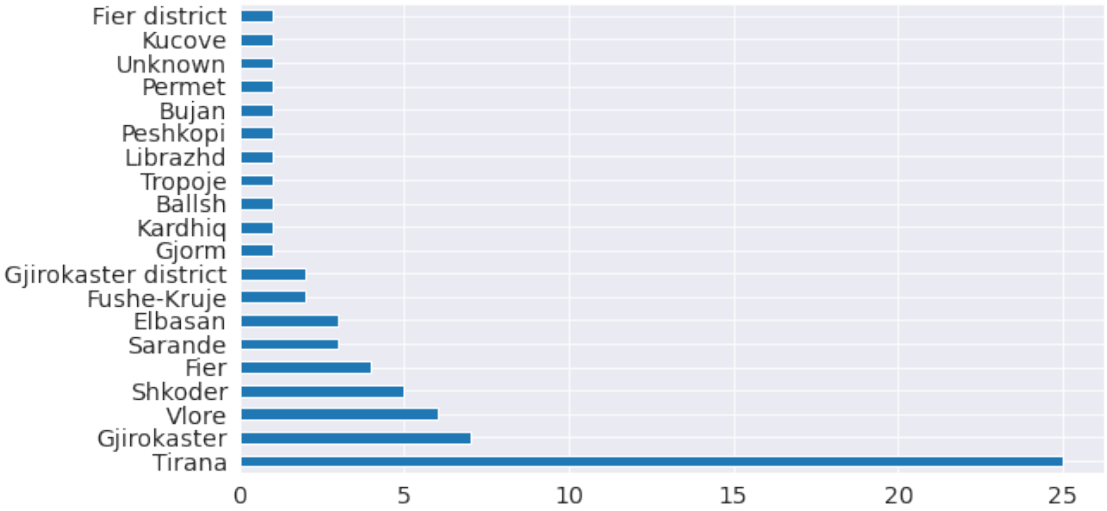
[42]: <AxesSubplot:>



We conclude that in Afghanistan many attacked places data is missing. Other than that the most attacked city is Kabul.

[54]:
```
df_country = filter_df.loc[(df['country_txt']== 'Albania')]
df_country
df_country['city'].value_counts()[:20].plot(kind='barh')
```

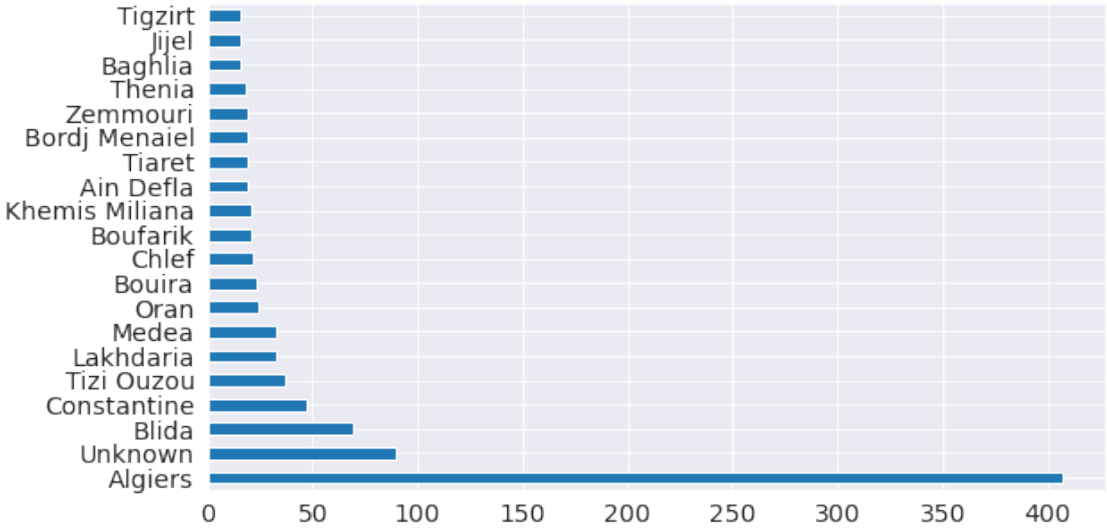
[54]: <AxesSubplot:>



We conclude that the most attacked city of Albania is Tirana. But the number of attacks are far less than that in Afghanistan.

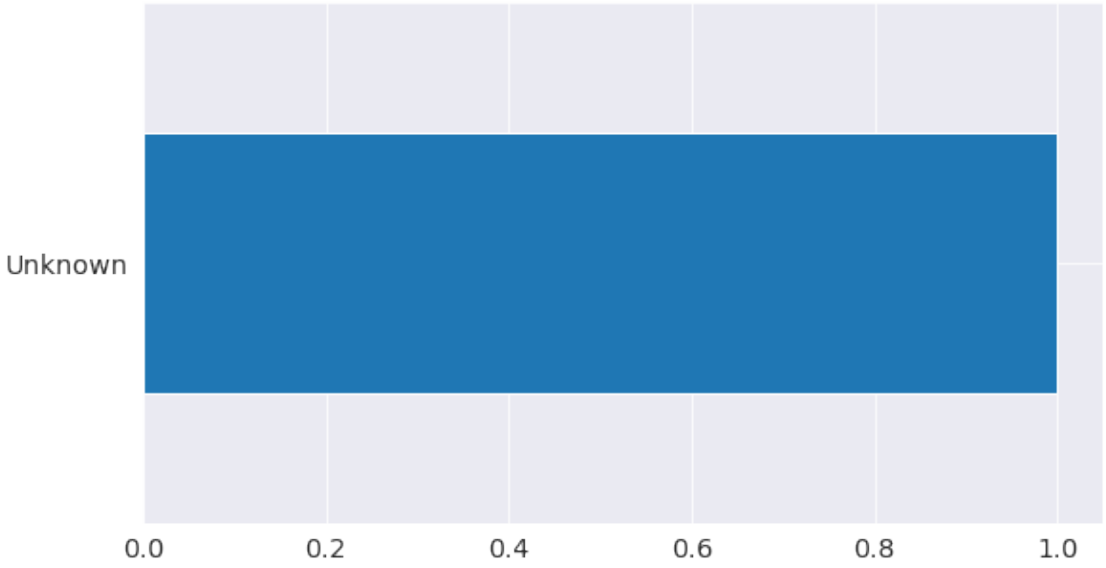
[46]:
```
df_country = filter_df.loc[(df['country_txt']== 'Algeria')]
df_country
df_country['city'].value_counts()[:20].plot(kind='barh')
```

[46]: <AxesSubplot:>



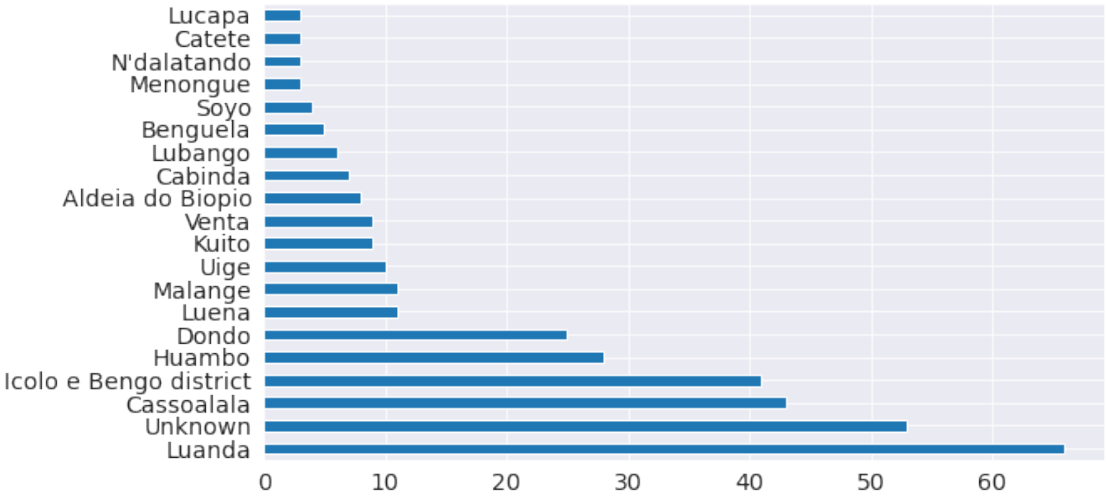
[49]:
```
df_country = filter_df.loc[(df['country_txt']== 'Andorra')]
df_country
df_country['city'].value_counts()[:20].plot(kind='barh')
```

[49]: <AxesSubplot:>



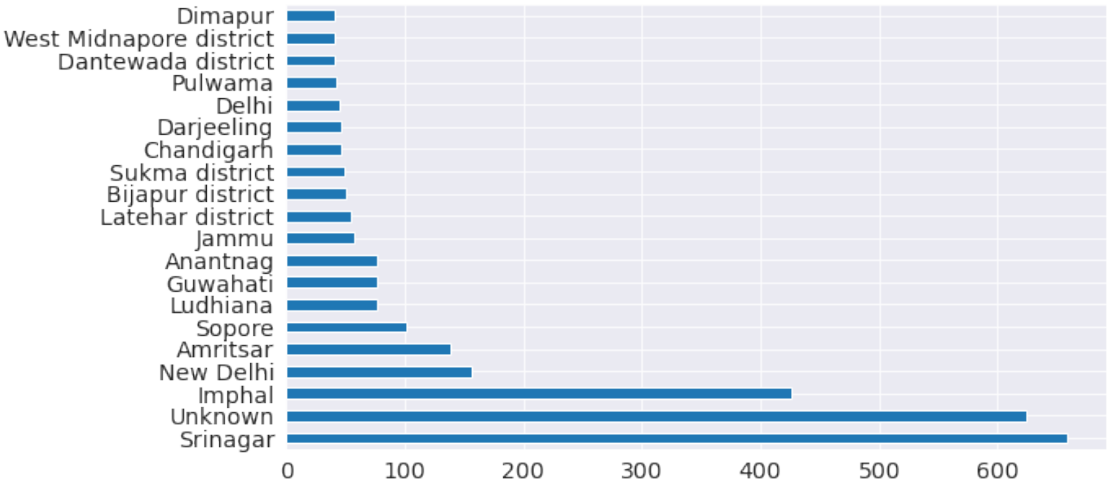
[50]:
```
df_country = filter_df.loc[(df['country_txt']== 'Angola')]
df_country
df_country['city'].value_counts()[:20].plot(kind='barh')
```

[50]: <AxesSubplot:>



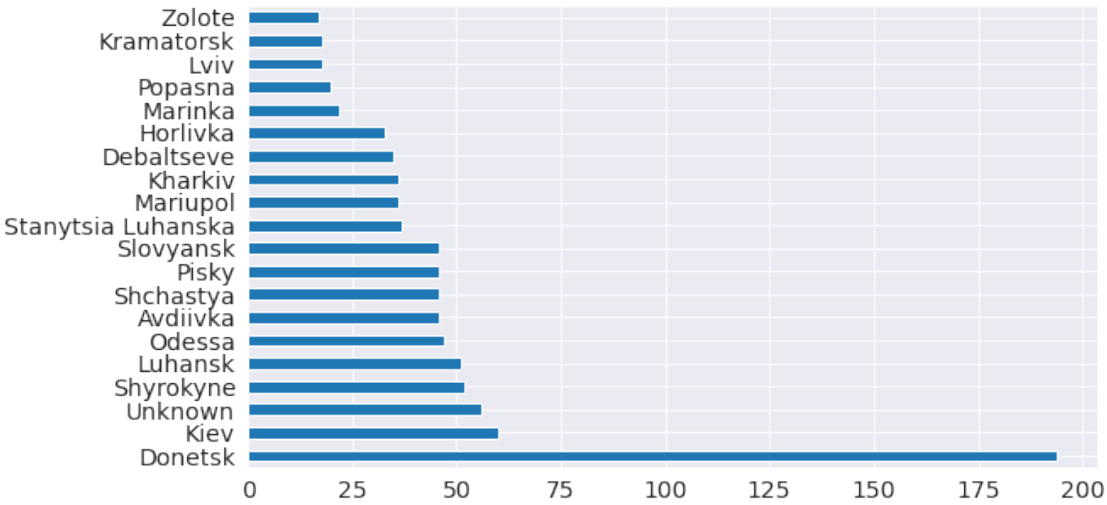
[51]:
```
df_country = filter_df.loc[(df['country_txt']== 'India')]
df_country
df_country['city'].value_counts()[:20].plot(kind='barh')
```

[51]: <AxesSubplot:>



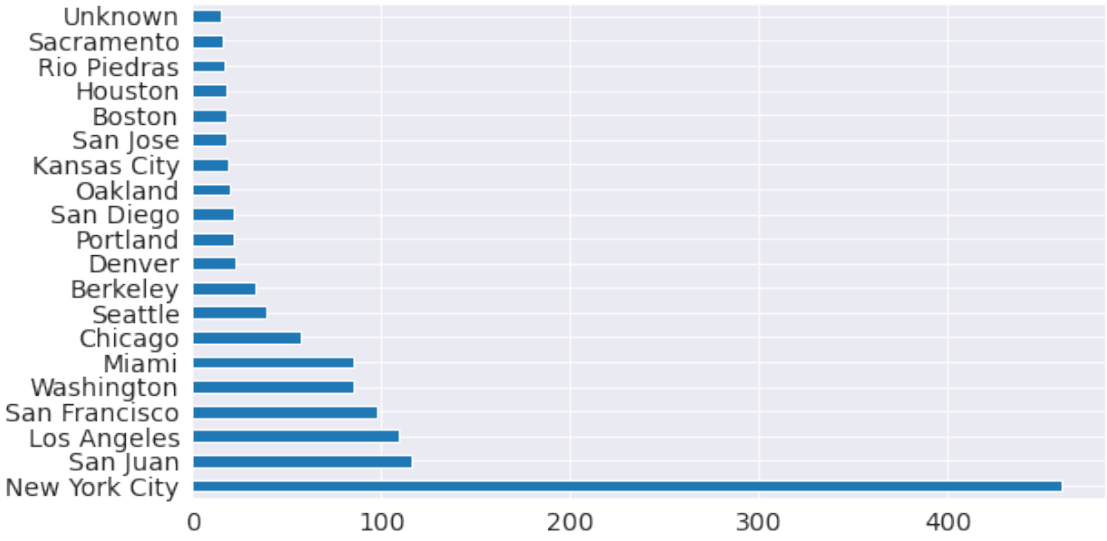
[52]:
```
df_country = filter_df.loc[(df['country_txt']== 'Ukraine')]
df_country
df_country['city'].value_counts()[:20].plot(kind='barh')
```

[52]: <AxesSubplot:>



[53]:
```
df_country = filter_df.loc[(df['country_txt']== 'United States')]
df_country
df_country['city'].value_counts()[:20].plot(kind='barh')
```

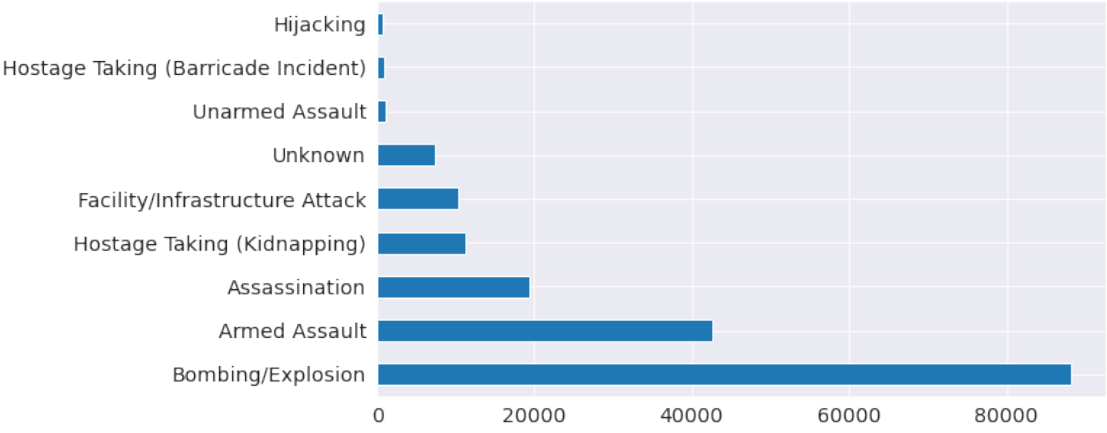
[53]: <AxesSubplot:>



Similarly just by changing the country name in above code cell we can plot graphs for each country and can determine the hot zones of each country.

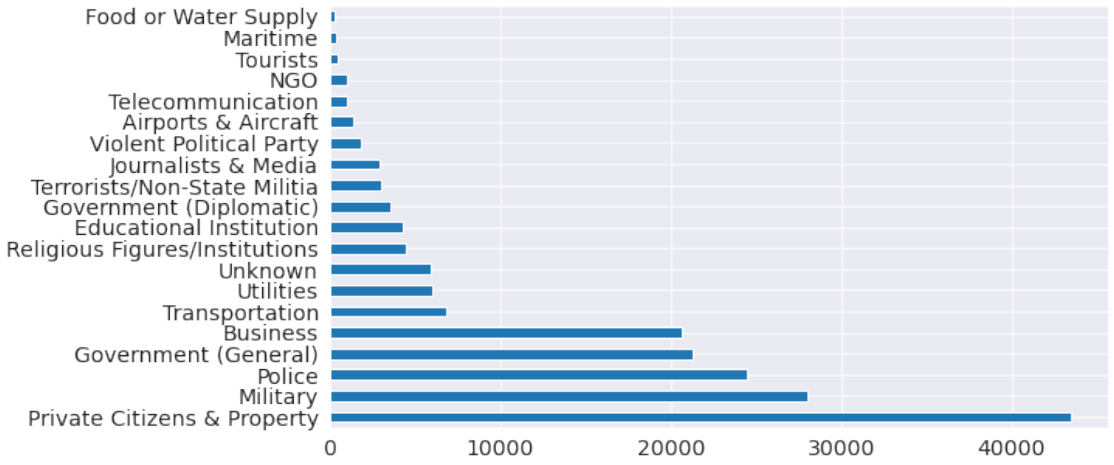
[55]:
```
filter_df['attacktype1_txt'].value_counts()[:20].plot(kind='barh')
```

[55]: <AxesSubplot:>



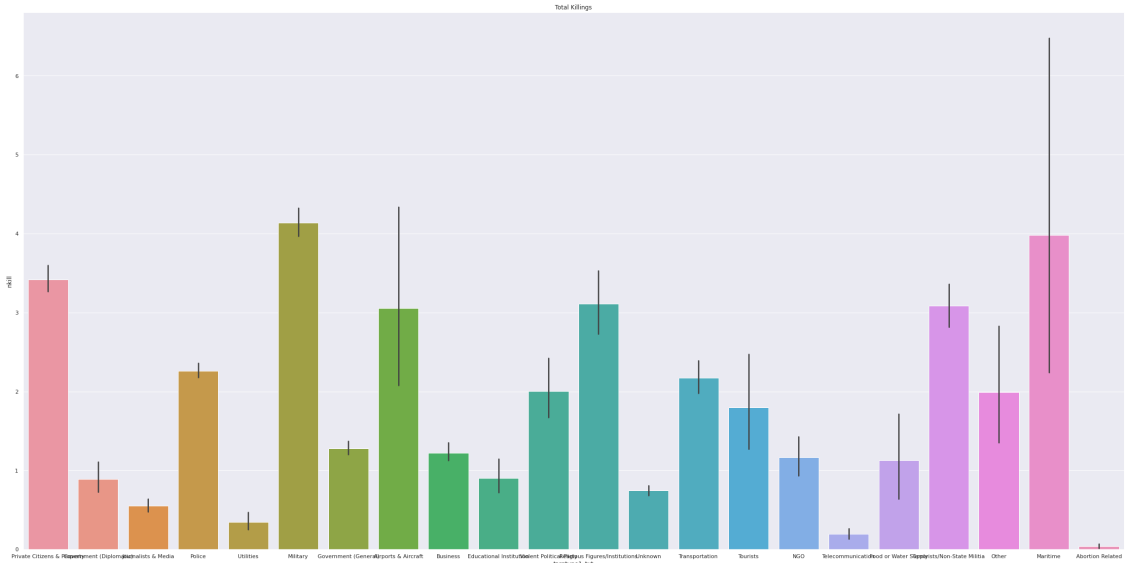
[56]:
```
filter_df['targtype1_txt'].value_counts()[:20].plot(kind='barh')
```

[56]: <AxesSubplot:>



[60]:
```
sns.barplot(x=df.targtype1_txt,y = df.nkill,data=df)
sns.set(rc={'figure.figsize':(80,20)})
plt.title('Total Killings')
```

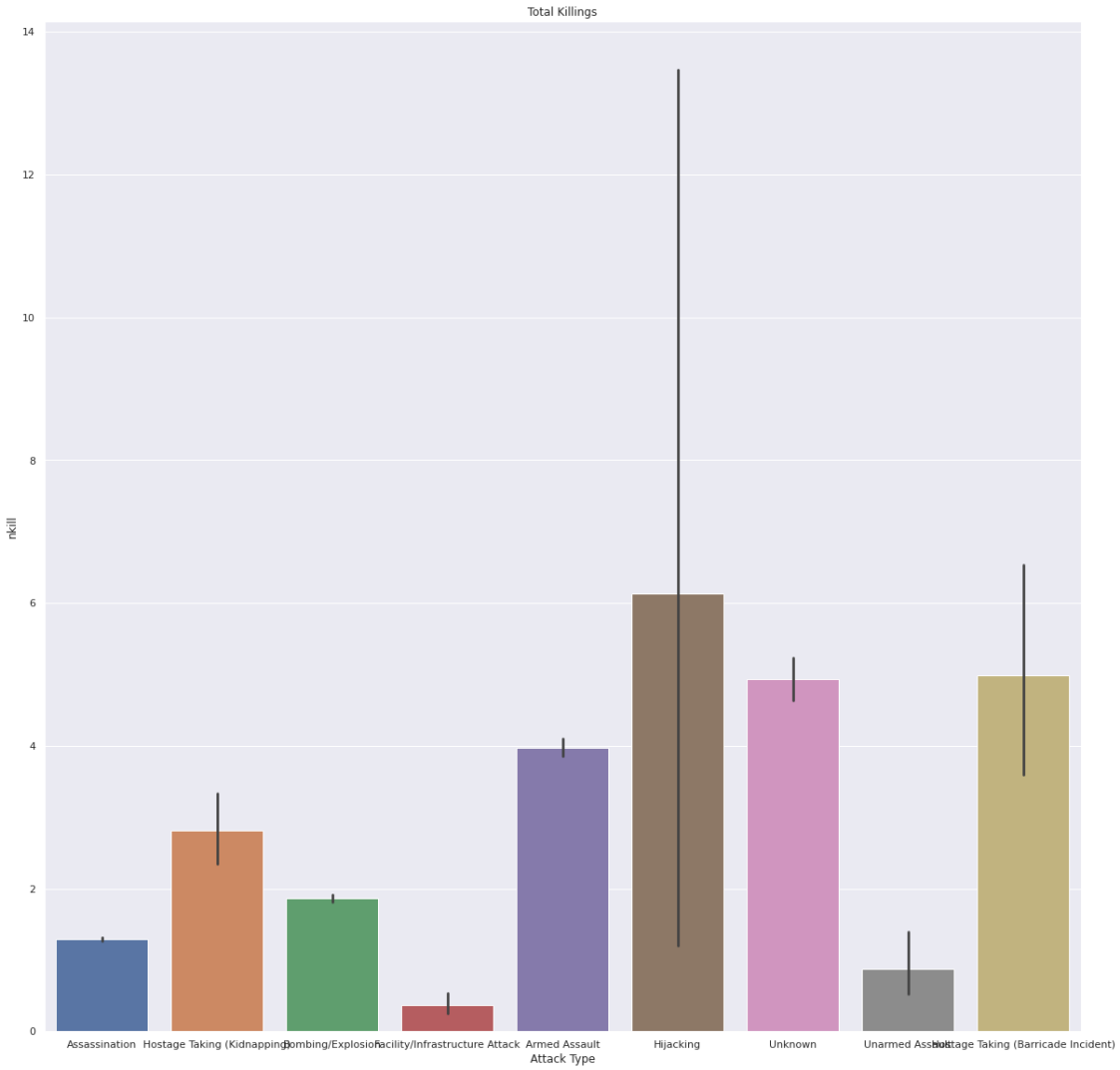
[60]: Text(0.5, 1.0, 'Total Killings')



[68]:
```
sns.barplot(x=df.attacktype1_txt,y = df.nkill,data=df)
sns.set(rc={'figure.figsize':(40,10)})
```

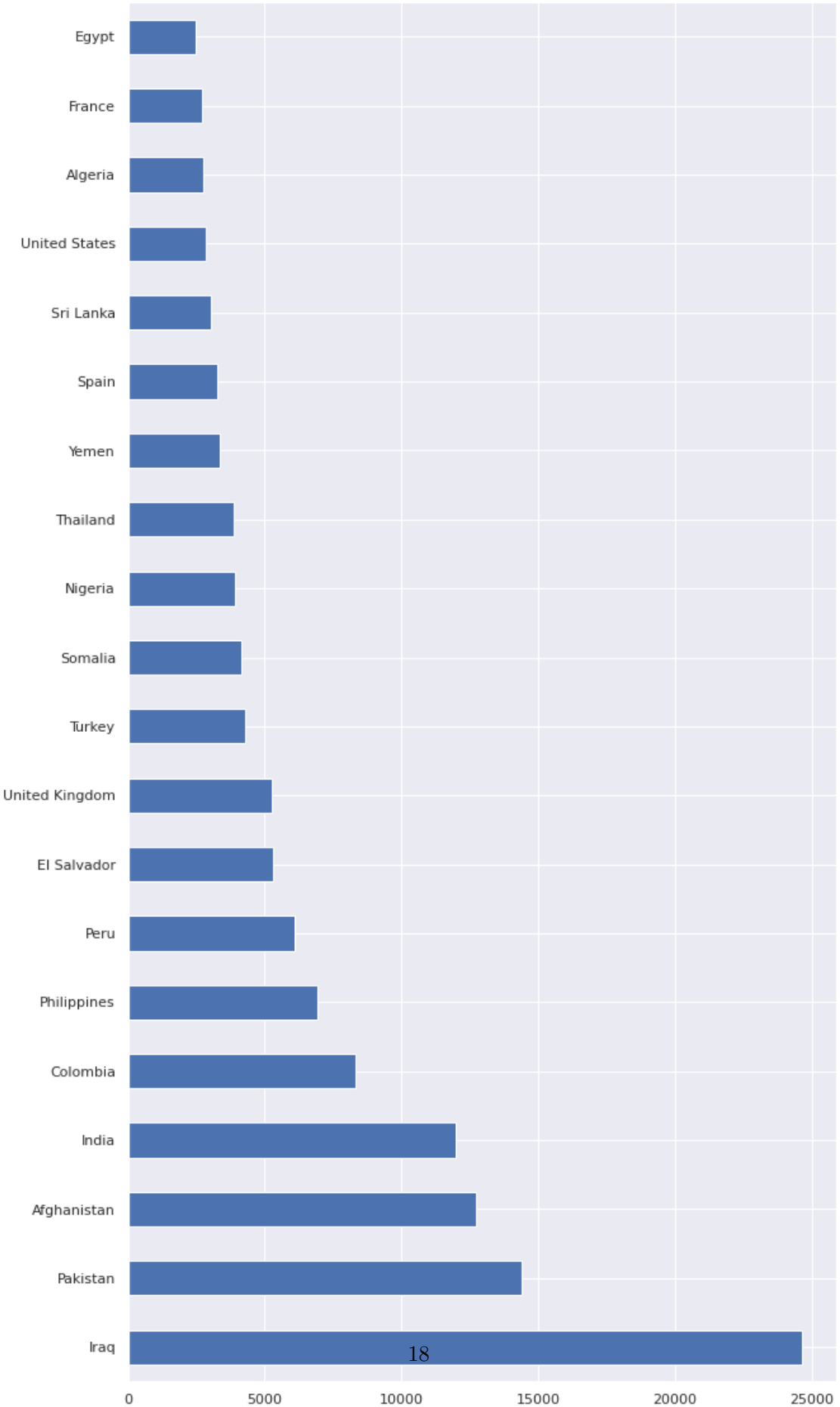
```
plt.title('Total Killings')
plt.xlabel('Attack Type')
```

[68]: Text(0.5, 0, 'Attack Type')



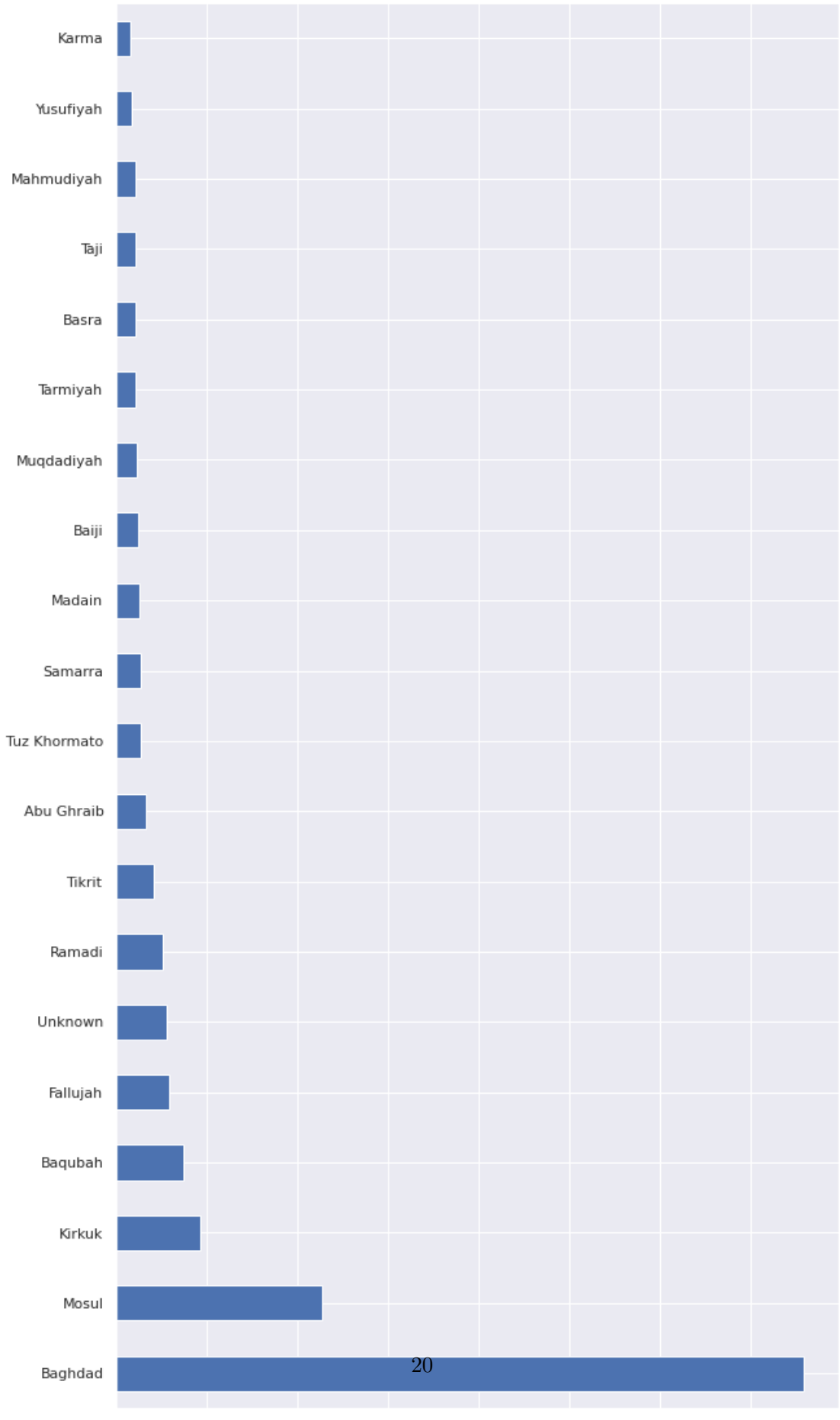
[64]:
```
filter_df['country_txt'].value_counts()[:20].plot(kind='barh')
```

[64]: <AxesSubplot:>


Egypt
France
Algeria
United States
Sri Lanka
Spain
Yemen
Thailand
Nigeria
Somalia
Turkey
United Kingdom
El Salvador
Peru
Philippines
Colombia
India
Afghanistan
Pakistan
Iraq
0
5000
10000
15000
20000
25000

[65]:
```
df_country = filter_df.loc[(df['country_txt']== 'Iraq')]
df_country
df_country['city'].value_counts()[:20].plot(kind='barh')
```

[65]: <AxesSubplot:>


Karma
Yusufiyah
Mahmudiyah
Taji
Basra
Tarmiyah
Muqdadiyah
Baiji
Madain
Samarra
Tuz Khormato
Abu Ghraib
Tikrit
Ramadi
Unknown
Fallujah
Baqubah
Kirkuk
Mosul
Baghdad
0
1000
2000
3000
4000
5000
6000
7000

[ ]: