terrorism

September 30, 2023

```
import numpy as np
[1]:
     import pandas as pd
     import matplotlib.pyplot as plt
     import seaborn as sns
[2]: df=pd.read_csv(r"C:\Users\HP\Downloads\gt.csv",low_memory=False)
[3]:
     df
                                                                 extended resolution
[3]:
                                              iday approxdate
                    eventid
                              iyear
                                     imonth
     0
              19700000001
                               1970
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              197000000002
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     2
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              197001000001
                                           1
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     3
              197001000002
                               1970
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              197001000003
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     181686
              201712310022
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     181687
              201712310029
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     181689
              201712310031
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     181690
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                                              region
                                                       ... addnotes
              country
                                country_txt
     0
                   58
                        Dominican Republic
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                                     Greece
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                                       Japan
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     181686
                   182
                                    Somalia
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181686
        "Somalia: Al-Shabaab Militants Attack Army Che...
        "Putin's 'victory' in Syria has turned into a ...
181687
        "Maguindanao clashes trap tribe members," Phil...
181688
        "Trader escapes grenade attack in Imphal," Bus...
181689
181690
        "Security tightened in Cotabato following IED ...
                                                        scite2
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        "Highlights: Somalia Daily Media Highlights 2 ...
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181687
        "Two Russian soldiers killed at Hmeymim base i...
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        "Security tightened in Cotabato City," Manila ...
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        "Highlights: Somalia Daily Media Highlights 1 ...
        "Two Russian servicemen killed in Syria mortar...
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181688
        START Primary Collection
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```

```
[181691 rows x 135 columns]
[4]: df.head()
[4]:
                               imonth
                                        iday approxdate
                                                           extended resolution
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              eventid
                        iyear
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                         1970
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     1
       197000000002
                         1970
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     4 197001000003
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                country_txt region ... addnotes scite1 scite2
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     [5 rows x 135 columns]
[5]: df.tail()
[5]:
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                                              iday approxdate
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     181690
              201712310032
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              country
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                            Somalia
     181686
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                  200
     181687
                              Syria
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     181688
                  160
                        Philippines
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                              India
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     181689
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     181690
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                        Philippines
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NaN

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181689 START Primary Collection

181690 START Primary Collection

scite1 \

```
"Putin's 'victory' in Syria has turned into a \dots
     181687
     181688
             "Maguindanao clashes trap tribe members," Phil...
     181689
             "Trader escapes grenade attack in Imphal," Bus...
     181690
             "Security tightened in Cotabato following IED ...
                                                          scite2 \
     181686
             "Highlights: Somalia Daily Media Highlights 2 ...
             "Two Russian soldiers killed at Hmeymim base i...
     181687
     181688
     181689
                                                              NaN
     181690
             "Security tightened in Cotabato City," Manila ...
                                                          scite3 \
     181686
             "Highlights: Somalia Daily Media Highlights 1 ...
     181687
             "Two Russian servicemen killed in Syria mortar...
     181688
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                              dbsource
                                                                              related
     181686 START Primary Collection
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     181687 START Primary Collection
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     181688 START Primary Collection
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     181689 START Primary Collection
                                              -9
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                                                                                   NaN
     181690 START Primary Collection
                                              -9
                                                        -9
                                                                          -9
                                                                                   NaN
     [5 rows x 135 columns]
[6]: df.isnull().sum()
                         0
[6]: eventid
                         0
     iyear
     imonth
                         0
     iday
                         0
     approxdate
                    172452
     INT_LOG
                         0
     INT_IDEO
                         0
     INT_MISC
                         0
     INT_ANY
                         0
     related
                    156653
     Length: 135, dtype: int64
[8]: df.info()
    <class 'pandas.core.frame.DataFrame'>
```

"Somalia: Al-Shabaab Militants Attack Army Che...

181686

RangeIndex: 181691 entries, 0 to 181690 Columns: 135 entries, eventid to related dtypes: float64(55), int64(22), object(58)

memory usage: 187.1+ MB

[9]: df.describe()

[9]:		eventid	iyear	imonth	iday	\
[0].	count	1.816910e+05	181691.000000	181691.000000	181691.000000	•
	mean	2.002705e+11	2002.638997	6.467277	15.505644	
	std	1.325957e+09	13.259430	3.388303	8.814045	
	min	1.970000e+11	1970.000000	0.000000	0.000000	
	25%	1.991021e+11	1991.000000	4.000000	8.000000	
	50%	2.009022e+11	2009.000000	6.000000	15.000000	
	75%	2.014081e+11	2014.000000	9.000000	23.000000	
	max	2.017123e+11	2017.000000	12.000000	31.000000	
		extended	country	region	latitude	\
	count	181691.000000	181691.000000	181691.000000	177135.000000	
	mean	0.045346	131.968501	7.160938	23.498343	
	std	0.208063	112.414535	2.933408	18.569242	
	min	0.000000	4.000000	1.000000	-53.154613	
	25%	0.000000	78.000000	5.000000	11.510046	
	50%	0.000000	98.000000	6.000000	31.467463	
	75%	0.000000	160.000000	10.000000	34.685087	
	max	1.000000	1004.000000	12.000000	74.633553	
		longitudo	anocificity	rangamamt	ransomamtus	\
	count	longitude 1.771340e+05	specificity 181685.000000	ransomamt 1.350000e+03	3 5.630000e+02	\
	mean	-4.586957e+02	1.451452	3.172530e+06		
	std	2.047790e+05	0.995430	3.021157e+07		
	min	-8.618590e+07	1.000000	9.900000e+01		
	25%	4.545640e+00	1.000000	0.000000e+00		
	50%	4.324651e+01	1.000000	1.500000e+04		
	75%	6.871033e+01	1.000000	4.000000e+05		
	max	1.793667e+02	5.000000	1.000000e+09		
		ransompaid	ransompaidus	hostkidoutcome	nreleased '	\
	count	7.740000e+02	552.000000	10991.000000	10400.000000	
	mean	7.179437e+05	240.378623	4.629242	-29.018269	
	std	1.014392e+07	2940.967293	2.035360	65.720119	
	min	-9.900000e+01	-99.000000	1.000000	-99.000000	
	25%	-9.900000e+01	0.000000	2.000000	-99.000000	
	50%	0.000000e+00	0.000000	4.000000	0.000000	
	75%	1.273412e+03	0.000000	7.000000	1.000000	
	max	2.750000e+08	48000.000000	7.000000	2769.000000	

```
INT_LOG
                                  INT_IDEO
                                                  INT_MISC
                                                                   INT_ANY
             181691.000000
                             181691.000000
                                             181691.000000
                                                             181691.000000
      count
      mean
                 -4.543731
                                 -4.464398
                                                  0.090010
                                                                 -3.945952
      std
                   4.543547
                                  4.637152
                                                  0.568457
                                                                  4.691325
                                 -9.000000
      min
                 -9.000000
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      25%
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                                 -9.000000
                                                  0.000000
                                                                  0.000000
      75%
                   0.000000
                                  0.000000
                                                  0.000000
                                                                  0.000000
      max
                   1.000000
                                  1.000000
                                                  1.000000
                                                                  1.000000
      [8 rows x 77 columns]
[10]: df.corr()
                   eventid
                               iyear
                                         imonth
                                                     iday
                                                           extended
                                                                       country \
                  1.000000
                            0.999996
                                      0.002706
                                                 0.018336
                                                           0.091761 -0.135039
      eventid
      iyear
                 0.999996
                            1.000000
                                      0.000139
                                                 0.018254
                                                           0.091754 -0.135023
      imonth
                 0.002706
                            0.000139
                                       1.000000
                                                 0.005497 -0.000468 -0.006305
                                      0.005497
                                                 1.000000 -0.004700 0.003468
      iday
                 0.018336
                            0.018254
      extended
                 0.091761
                            0.091754 -0.000468 -0.004700
                                                           1.000000 -0.020466
      nreleased -0.181612 -0.181556 -0.011535
                                                0.001765 -0.192155 -0.044331
      INT_LOG
                -0.143600 -0.143601 -0.002302 -0.001540
                                                           0.071768
                                                                      0.069904
      INT IDEO
                -0.133252 -0.133253 -0.002034 -0.001621
                                                           0.075147
                                                                      0.067564
      INT_MISC
                -0.077852 -0.077847 -0.002554 -0.002027
                                                           0.027335
                                                                      0.207281
      INT_ANY
                -0.175605 -0.175596 -0.006336 -0.001199
                                                           0.080767
                                                                      0.153118
                            latitude
                                      longitude
                                                  specificity
                                                                   ransomamt
                   region
                 0.401371
                            0.166886
                                        0.003907
                                                     0.030641
                                                                   -0.009990
      eventid
      iyear
                 0.401384
                            0.166933
                                        0.003917
                                                     0.030626
                                                                   -0.009984
      imonth
                -0.002999 -0.015978
                                      -0.003880
                                                     0.003621
                                                                   -0.000710
      iday
                                                    -0.006991
                 0.009710
                            0.003423
                                       -0.002285
                                                                    0.012755
      extended
                 0.038389 -0.024749
                                        0.000523
                                                     0.057897
                                                                   -0.008114
      nreleased -0.149511 0.002790
                                      -0.017745
                                                    -0.030631 ...
                                                                    0.054571
      INT LOG
                -0.082584 -0.099827
                                        0.002272
                                                     0.073022
                                                                    0.035821
      INT IDEO
                                                     0.071333 ...
                -0.071917 -0.094470
                                        0.002268
                                                                    0.039053
      INT_MISC
                 0.043139 0.097652
                                        0.000371
                                                    -0.019197
                                                                    0.023815
      INT_ANY
                -0.047900 -0.041530
                                        0.002497
                                                     0.061389
                                                                    0.028054
                                                          hostkidoutcome
                 ransomamtus
                               ransompaid
                                            ransompaidus
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      eventid
                    -0.018001
                                -0.014094
                                               -0.165422
                                                                 0.256113
                                                                           -0.181612
      iyear
                    -0.018216
                                -0.014238
                                               -0.165375
                                                                 0.256092
                                                                           -0.181556
      imonth
                     0.046989
                                 0.058878
                                               -0.016597
                                                                 0.011295
                                                                           -0.011535
      iday
                    -0.010502
                                 0.003148
                                               -0.006581
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                                                                            0.001765
```

[10]:

extended

0.028177

0.001966

0.009367

0.233293

-0.192155

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nreleased
              0.034843
                          0.049322
                                        0.016832
                                                       -0.555478
                                                                   1.000000
INT_LOG
              0.031079
                          0.007029
                                       -0.045504
                                                       -0.015442
                                                                   0.039388
INT IDEO
              0.041983
                          0.013162
                                       -0.039844
                                                       -0.016234
                                                                   0.040947
INT_MISC
              0.125162
                          0.037227
                                        0.129274
                                                       -0.119776
                                                                   0.085055
INT_ANY
              0.053484
                          0.007275
                                        0.056438
                                                       -0.061946
                                                                   0.064759
            INT LOG INT IDEO INT MISC
                                          INT ANY
eventid
          -0.143600 -0.133252 -0.077852 -0.175605
          -0.143601 -0.133253 -0.077847 -0.175596
iyear
imonth
          -0.002302 -0.002034 -0.002554 -0.006336
          -0.001540 -0.001621 -0.002027 -0.001199
idav
extended
           0.071768 0.075147 0.027335 0.080767
nreleased 0.039388
                     0.040947 0.085055
                                         0.064759
INT LOG
           1.000000
                     0.996211 0.052537
                                         0.891051
INT_IDEO
           0.996211
                     1.000000 0.082014
                                         0.893811
INT_MISC
           0.052537
                     0.082014 1.000000
                                         0.252193
INT_ANY
           0.891051 0.893811 0.252193
                                        1.000000
```

[77 rows x 77 columns]

[13]: df.dropna()

[13]: Empty DataFrame

Columns: [eventid, iyear, imonth, iday, approxdate, extended, resolution, country, country_txt, region, region_txt, provstate, city, latitude, longitude, specificity, vicinity, location, summary, crit1, crit2, crit3, doubtterr, alternative, alternative_txt, multiple, success, suicide, attacktype1, attacktype1 txt, attacktype2, attacktype2 txt, attacktype3, attacktype3 txt, targtype1, targtype1_txt, targsubtype1, targsubtype1_txt, corp1, target1, natlty1, natlty1_txt, targtype2, targtype2_txt, targsubtype2, targsubtype2_txt, corp2, target2, natlty2, natlty2_txt, targtype3, targtype3_txt, targsubtype3, targsubtype3 txt, corp3, target3, natlty3, natlty3 txt, gname, gsubname, gname2, gsubname2, gname3, gsubname3, motive, guncertain1, guncertain2, guncertain3, individual, nperps, nperpcap, claimed, claimmode, claimmode_txt, claim2, claimmode2, claimmode2_txt, claim3, claimmode3, claimmode3_txt, compclaim, weaptype1, weaptype1_txt, weapsubtype1, weapsubtype1_txt, weaptype2, weaptype2_txt, weapsubtype2, weapsubtype2_txt, weaptype3, weaptype3_txt, weapsubtype3, weapsubtype3_txt, weaptype4, weaptype4_txt, weapsubtype4, weapsubtype4_txt, weapdetail, nkill, nkillus, ...] Index: []

[0 rows x 135 columns]

[14]: df

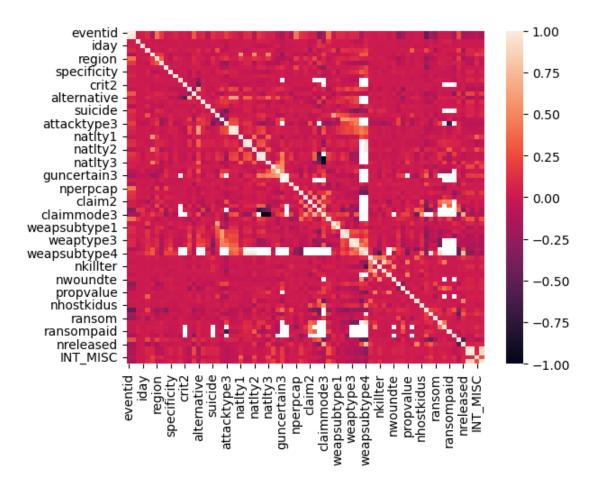
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[14]:
                                       imonth
                                                iday approxdate
                                                                  extended resolution
                     eventid
                               iyear
      0
               19700000001
                                1970
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                                            7
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                                       Mexico
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                                       Greece
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                                                                NaN
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                    101
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      181686
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                                     Somalia
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                                        Syria
      181687
                    200
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      181688
                    160
                                 Philippines
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                                                                NaN
                                        India
                                                     6
      181689
                     92
                                                                NaN
                    160
                                 Philippines
                                                     5
                                                                NaN
      181690
                                                               scite1
      0
                                                                   NaN
      1
                                                                   NaN
      2
                                                                   NaN
      3
                                                                   NaN
      4
                                                                   NaN
               "Somalia: Al-Shabaab Militants Attack Army Che...
      181686
               "Putin's 'victory' in Syria has turned into a ...
      181687
               "Maguindanao clashes trap tribe members," Phil...
      181688
               "Trader escapes grenade attack in Imphal," Bus...
      181689
      181690
               "Security tightened in Cotabato following IED ...
                                                               scite2
                                                                        \
      0
                                                                   NaN
      1
                                                                   NaN
      2
                                                                   NaN
      3
                                                                   NaN
      4
                                                                   NaN
               "Highlights: Somalia Daily Media Highlights 2 ...
```

```
181687
        "Two Russian soldiers killed at Hmeymim base i...
181688
                                                           NaN
181689
                                                           NaN
        "Security tightened in Cotabato City," Manila ...
181690
                                                       scite3
0
                                                           NaN
1
                                                           NaN
2
                                                           NaN
3
                                                           NaN
4
                                                           NaN
181686
        "Highlights: Somalia Daily Media Highlights 1 ...
        "Two Russian servicemen killed in Syria mortar...
181687
181688
                                                           NaN
                                                           NaN
181689
181690
                                                           NaN
                                     INT_LOG
                                               INT_IDEO INT_MISC INT_ANY
                          dbsource
0
                                                                0
                              PGIS
                                           0
                                                      0
                                                                         0
                                                                                 NaN
1
                              PGIS
                                           0
                                                      1
                                                                1
                                                                         1
                                                                                 {\tt NaN}
2
                              PGIS
                                          -9
                                                     -9
                                                                1
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                                                                                 NaN
3
                              PGIS
                                          -9
                                                     -9
                                                                1
                                                                         1
                                                                                 NaN
4
                                                                1
                              PGIS
                                          -9
                                                     -9
                                                                         1
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                                                     •••
181686 START Primary Collection
                                           0
                                                      0
                                                                0
                                                                         0
                                                                                 NaN
181687 START Primary Collection
                                                                                 NaN
                                          -9
                                                     -9
                                                                1
                                                                         1
181688 START Primary Collection
                                           0
                                                      0
                                                                0
                                                                         0
                                                                                 NaN
181689 START Primary Collection
                                                     -9
                                                                0
                                                                        -9
                                          -9
                                                                                 NaN
181690 START Primary Collection
                                          -9
                                                     -9
                                                                0
                                                                        -9
                                                                                 {\tt NaN}
```

[181691 rows x 135 columns]

[15]: sns.heatmap(df.corr())

[15]: <AxesSubplot:>



[45]: df.columns.values

```
[45]: array(['eventid', 'iyear', 'imonth', 'iday', 'approxdate', 'extended',
             'resolution', 'country', 'country_txt', 'region', 'region_txt',
             'provstate', 'city', 'latitude', 'longitude', 'specificity',
             'vicinity', 'location', 'summary', 'crit1', 'crit2', 'crit3',
             'doubtterr', 'alternative', 'alternative_txt', 'multiple',
             'success', 'suicide', 'attacktype1', 'attacktype1_txt',
             'attacktype2', 'attacktype2_txt', 'attacktype3', 'attacktype3_txt',
             'targtype1', 'targtype1_txt', 'targsubtype1', 'targsubtype1_txt',
             'corp1', 'target1', 'natlty1', 'natlty1_txt', 'targtype2',
             'targtype2_txt', 'targsubtype2', 'targsubtype2_txt', 'corp2',
             'target2', 'natlty2', 'natlty2_txt', 'targtype3', 'targtype3_txt',
             'targsubtype3', 'targsubtype3_txt', 'corp3', 'target3', 'natlty3',
             'natlty3_txt', 'gname', 'gsubname', 'gname2', 'gsubname2',
             'gname3', 'gsubname3', 'motive', 'guncertain1', 'guncertain2',
             'guncertain3', 'individual', 'nperps', 'nperpcap', 'claimed',
             'claimmode', 'claimmode_txt', 'claim2', 'claimmode2',
             'claimmode2_txt', 'claim3', 'claimmode3', 'claimmode3_txt',
```

```
'compclaim', 'weaptype1', 'weaptype1_txt', 'weapsubtype1',
             'weapsubtype1_txt', 'weaptype2', 'weaptype2_txt', 'weapsubtype2',
             'weapsubtype2_txt', 'weaptype3', 'weaptype3_txt', 'weapsubtype3',
             'weapsubtype3_txt', 'weaptype4', 'weaptype4_txt', 'weapsubtype4',
             'weapsubtype4_txt', 'weapdetail', 'nkill', 'nkillus', 'nkillter',
             'nwound', 'nwoundus', 'nwoundte', 'property', 'propextent',
             'propextent_txt', 'propvalue', 'propcomment', 'ishostkid',
             'nhostkid', 'nhostkidus', 'nhours', 'ndays', 'divert',
             'kidhijcountry', 'ransom', 'ransomamt', 'ransomamtus',
             'ransompaid', 'ransompaidus', 'ransomnote', 'hostkidoutcome',
             'hostkidoutcome_txt', 'nreleased', 'addnotes', 'scite1', 'scite2',
             'scite3', 'dbsource', 'INT_LOG', 'INT_IDEO', 'INT_MISC', 'INT_ANY',
             'related'], dtype=object)
[56]: df = 1
       odf[['iyear','imonth','iday','country_txt','provstate','region','city','latitude','longitude
       → 'nwound', 'target1', 'summary', 'gname', 'targsubtype1_txt', 'weaptype1_txt', 'motive']]
[58]: df.isnull().sum().sum()
[58]: 244860
[57]: df
[57]:
              iyear
                     imonth
                             iday
                                           country_txt
                                                              provstate region
                                    Dominican Republic
               1970
                          7
                                 2
                                                                     NaN
                          0
      1
               1970
                                 0
                                                Mexico
                                                                 Federal
                                                                               1
      2
               1970
                          1
                                 0
                                           Philippines
                                                                  Tarlac
                                                                               5
      3
                          1
                                 0
                                                Greece
               1970
                                                                  Attica
                                                                               8
      4
               1970
                          1
                                 0
                                                 Japan
                                                                 Fukouka
      181686
               2017
                         12
                                31
                                               Somalia Middle Shebelle
                                                                              11
      181687
               2017
                         12
                                31
                                                 Syria
                                                                Lattakia
                                                                              10
      181688
               2017
                         12
                                31
                                           Philippines
                                                            Maguindanao
                                                                               5
      181689
               2017
                         12
                                31
                                                 India
                                                                Manipur
                                                                               6
      181690
               2017
                         12
                                31
                                           Philippines
                                                            Maguindanao
                                                                               5
                       city
                                          longitude
                                                                     attacktype1_txt \
                              latitude
      0
              Santo Domingo 18.456792 -69.951164
                                                                       Assassination
      1
                Mexico city 19.371887
                                         -99.086624
                                                        Hostage Taking (Kidnapping)
      2
                    Unknown 15.478598 120.599741
                                                                       Assassination
      3
                     Athens 37.997490
                                          23.762728
                                                                   Bombing/Explosion
      4
                    Fukouka 33.580412 130.396361 Facility/Infrastructure Attack
      181686
              Ceelka Geelow
                              2.359673
                                          45.385034
                                                                       Armed Assault
      181687
                     Jableh 35.407278
                                          35.942679
                                                                   Bombing/Explosion
```

```
181688
             Kubentog
                         6.900742
                                    124.437908
                                                Facility/Infrastructure Attack
181689
                Imphal
                        24.798346
                                     93.940430
                                                               Bombing/Explosion
181690
        Cotabato City
                         7.209594
                                    124.241966
                                                               Bombing/Explosion
        nkill
               nwound
                                         target1
0
          1.0
                   0.0
                                    Julio Guzman
1
          0.0
                   0.0
                        Nadine Chaval, daughter
2
          1.0
                   0.0
                                        Employee
3
                                    U.S. Embassy
          NaN
                   NaN
4
                                  U.S. Consulate
          NaN
                   NaN
181686
          1.0
                   2.0
                                      Checkpoint
181687
          2.0
                   7.0
                                Hmeymim Air Base
181688
          0.0
                   0.0
                                          Houses
181689
          0.0
                   0.0
                                          Office
181690
          0.0
                   0.0
                                         Unknown
                                                     summary
0
                                                         NaN
1
                                                         NaN
2
                                                         NaN
3
                                                         NaN
4
                                                         NaN
        12/31/2017: Assailants opened fire on a Somali...
181686
181687
        12/31/2017: Assailants launched mortars at the...
181688
        12/31/2017: Assailants set fire to houses in K...
        12/31/2017: Assailants threw a grenade at a Fo...
181689
181690
        12/31/2017: An explosive device was discovered...
                                                gname
                                                       \
0
                                               MANO-D
1
                23rd of September Communist League
2
                                              Unknown
3
                                              Unknown
4
                                              Unknown
                                          Al-Shabaab
181686
                                   Muslim extremists
181687
        Bangsamoro Islamic Freedom Movement (BIFM)
181688
181689
                                              Unknown
181690
                                              Unknown
                                           targsubtype1_txt weaptype1_txt motive
0
                                              Named Civilian
                                                                                NaN
                                                                    Unknown
1
        Diplomatic Personnel (outside of embassy, cons...
                                                                              NaN
                                                                  Unknown
2
                           Radio Journalist/Staff/Facility
                                                                    Unknown
                                                                                NaN
```

3	Embassy/Consulate	Explosives	NaN
4	Embassy/Consulate	Incendiary	NaN
•••			
181686	Military Checkpoint	Firearms	NaN
181687	Military Barracks/Base/Headquarters/Checkpost	Explosives	NaN
181688	House/Apartment/Residence	Incendiary	NaN
181689	Government Building/Facility/Office	Explosives	NaN
181690	NaN	Explosives	NaN

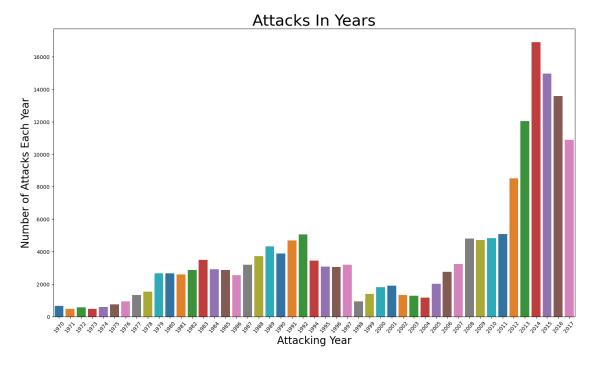
[181691 rows x 18 columns]

[UU] · UI · I I I I I I I I I U	59]:	df.:	fill	na(0)
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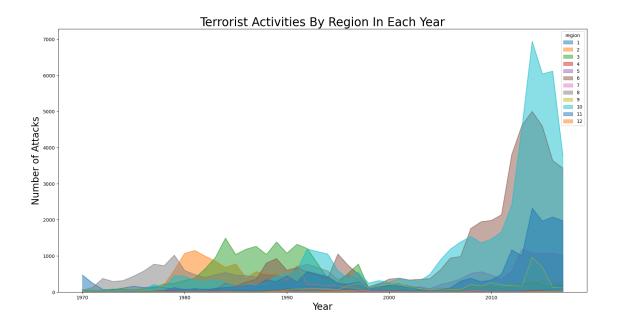
[59]:		iyear	imonth	iday		country_t	xt	provstate	region	\	
	0	1970	7	2	Domi	nican Republ	ic	0	2		
	1	1970	1970 0			Mexi	.co	Federal	1		
	2	1970	1	0		Philippin	es	Tarlac	5		
	3	1970	1	0		Gree	се	Attica	8		
	4	1970	1	0		Jap	an	Fukouka	4		
	•••	•••				•••					
	181686	2017	12	31		Somal	ia	Middle Shebelle	11		
	181687	2017	12	31		Syr	ia	Lattakia	10		
	181688	2017	12	31		Philippin	es	Maguindanao	5		
	181689			31	31 India		Manipur	6			
	181690	2017	12	31		Philippin	es	Maguindanao	5		
			city	latit	tude	longitude		atta	.cktype1_	txt	\
	O Santo Domingo		18.456	3792	-69.951164		As	sassinat	ion		
	1	Mexi	co city	19.371	1887	-99.086624		Hostage Taking (Kidnappi	ng)	
	2		Unknown	15.478	3598	120.599741		As	sassinat	ion	
	3		Athens	37.997	7490	23.762728		Bombin	g/Explos	ion	
	4		Fukouka	33.580	0412	130.396361	Fa	cility/Infrastruc	ture Att	ack	
	•••		•••	•••					•••		
	181686	Ceelka	Geelow	2.359673 45.385034 Armed A				med Assa	ult		
	181687	Jableh Kubentog Imphal Cotabato City		35.407	7278	35.942679		Bombing/Explos			
	181688			6.900	0742	124.437908	Fa	cility/Infrastruc	ture Att	ack	
	181689			24.798	3346	93.940430		Bombin	g/Explos	ion	
	181690			7.209	7.209594 124.241966		Bombin	Bombing/Explosion			
		nkill	nwound			target		\			
	0	1.0	0.0			Julio Guzma					
	1	0.0	0.0	Nadine	e Cha	val, daughte	r				
	2	1.0	0.0		Employe	e					
	3	0.0	0.0			U.S. Embass	у				
	4	0.0	0.0		U	J.S. Consulat	e				
	•••	•••	•••			•••					
	181686	1.0	2.0			Checkpoin	t				

```
181687
          2.0
                   7.0
                                Hmeymim Air Base
          0.0
181688
                   0.0
                                          Houses
181689
          0.0
                   0.0
                                          Office
          0.0
181690
                   0.0
                                         Unknown
                                                     summary
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                                                           0
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4
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181686
        12/31/2017: Assailants opened fire on a Somali...
181687
        12/31/2017: Assailants launched mortars at the...
        12/31/2017: Assailants set fire to houses in K...
181688
181689
        12/31/2017: Assailants threw a grenade at a Fo...
181690
        12/31/2017: An explosive device was discovered...
                                                gname
0
                                              MANO-D
                 23rd of September Communist League
1
2
                                             Unknown
3
                                             Unknown
4
                                             Unknown
181686
                                          Al-Shabaab
                                   Muslim extremists
181687
        Bangsamoro Islamic Freedom Movement (BIFM)
181688
181689
                                             Unknown
181690
                                             Unknown
                                           targsubtype1_txt weaptype1_txt motive
0
                                             Named Civilian
                                                                    Unknown
                                                                                  0
                                                                                0
1
        Diplomatic Personnel (outside of embassy, cons...
                                                                  Unknown
2
                           Radio Journalist/Staff/Facility
                                                                    Unknown
                                                                                  0
3
                                          Embassy/Consulate
                                                                 Explosives
                                                                                  0
4
                                          Embassy/Consulate
                                                                 Incendiary
                                                                                  0
181686
                                        Military Checkpoint
                                                                   Firearms
                                                                                  0
            Military Barracks/Base/Headquarters/Checkpost
                                                                 Explosives
                                                                                  0
181687
                                  House/Apartment/Residence
                                                                 Incendiary
181688
                                                                                  0
181689
                       Government Building/Facility/Office
                                                                 Explosives
                                                                                  0
181690
                                                                 Explosives
                                                                                  0
```

[181691 rows x 18 columns]

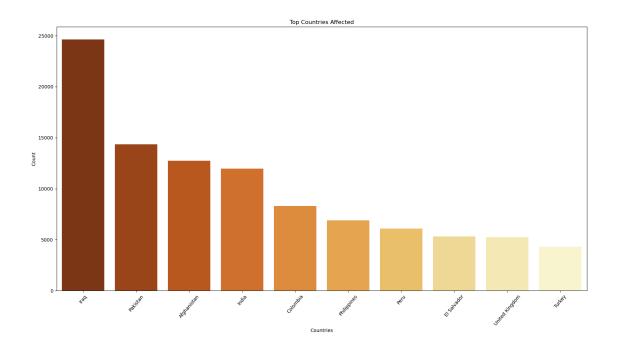


```
[61]: pd.crosstab(df.iyear, df.region).plot(kind='area',stacked=False,figsize=(20,10))
plt.title('Terrorist Activities By Region In Each Year',fontsize=25)
plt.ylabel('Number of Attacks',fontsize=20)
plt.xlabel("Year",fontsize=20)
plt.show()
```



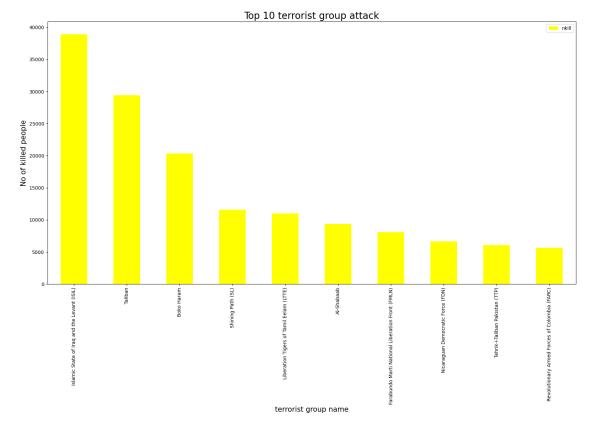
C:\Users\HP\anaconda3\lib\site-packages\seaborn_decorators.py:36:
FutureWarning: Pass the following variables as keyword args: x, y. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit keyword will result in an error or misinterpretation.

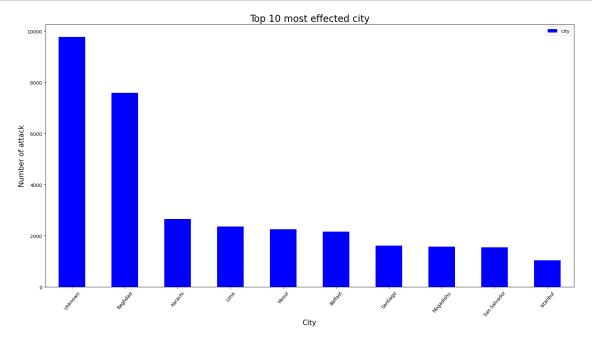
warnings.warn(

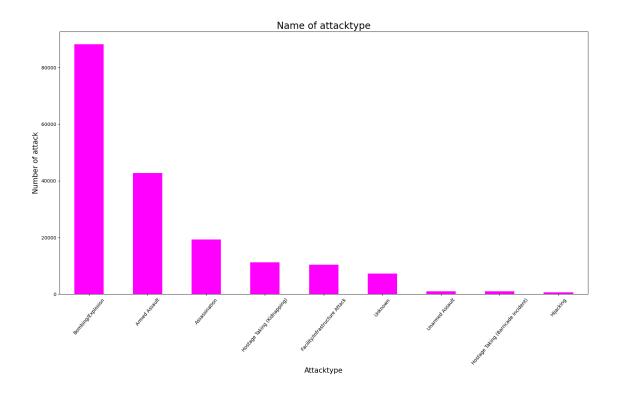


```
[65]: countryKill = df.pivot_table(columns='country_txt', values='nkill',
      →aggfunc='sum')
     countryKill
[65]: country_txt Afghanistan Albania Algeria Andorra Angola \
     nkill
                      39384.0
                                  42.0
                                       11066.0
                                                    0.0 3043.0
     country_txt Antigua and Barbuda Argentina Armenia Australia Austria ... \
     nkill
                                  0.0
                                          490.0
                                                    37.0
                                                               23.0
                                                                        30.0 ...
     country_txt Vietnam Wallis and Futuna West Bank and Gaza Strip \
     nkill
                      1.0
                                         0.0
                                                               1500.0
     country_txt West Germany (FRG) Western Sahara Yemen Yugoslavia Zaire \
     nkill
                                97.0
                                                1.0 8776.0
                                                                  119.0 324.0
     country_txt Zambia Zimbabwe
     nkill
                    70.0
                             154.0
     [1 rows x 205 columns]
[67]: typeKill = df.pivot_table(columns='attacktype1_txt', values='nkill', u
      →aggfunc='sum')
     typeKill
```

```
[67]: attacktype1_txt Armed Assault Assassination Bombing/Explosion \
     nkill
                            160297.0
                                            24920.0
                                                              157321.0
      attacktype1_txt Facility/Infrastructure Attack Hijacking \
     nkill
                                               3642.0
                                                          3718.0
      attacktype1_txt Hostage Taking (Barricade Incident)
     nkill
                                                    4478.0
      attacktype1_txt Hostage Taking (Kidnapping)
                                                   Unarmed Assault
                                                                    Unknown
     nkill
                                           24231.0
                                                             880.0 32381.0
[68]: df[['gname','nkill']].groupby(['gname'],axis=0).sum().drop('Unknown').
       ⇒sort_values('nkill',ascending=False).head(10).
       →plot(kind='bar',color='yellow',figsize=(20,10))
      plt.title("Top 10 terrorist group attack",fontsize=20)
      plt.xlabel("terrorist group name",fontsize=15)
      plt.ylabel("No of killed people",fontsize=15)
      plt.show()
```







```
[74]: kill = df.loc[:,'nkill']
print('Number of people killed by terror attack:', int(sum(kill.dropna())))
```

Number of people killed by terror attack: 411868

```
[77]: typeKill = df.pivot_table(columns='attacktype1_txt', values='nkill', u →aggfunc='sum')
typeKill
```

```
[77]: attacktype1_txt Armed Assault Assassination Bombing/Explosion \
nkill 160297.0 24920.0 157321.0

attacktype1_txt Facility/Infrastructure Attack Hijacking \
nkill 3642.0 3718.0

attacktype1_txt Hostage Taking (Barricade Incident) \
nkill 4478.0
```

attacktype1_txt Hostage Taking (Kidnapping) Unarmed Assault Unknown nkill 24231.0 880.0 32381.0

Conclusion and Results:

Country with the most attacks: Iraq City with the most attacks: Baghdad Region with the most attacks: Middle East & North Africa

Year with the most attacks: 2014 Month with the most attacks: 5

Group with the most attacks: Taliban

Most Attack Types: Bombing/Explosion