2_run_report

October 3, 2021

```
[57]: %matplotlib inline
      from matplotlib import pyplot as plt
      import pandas as pd
```

```
[52]: dfp = pd.read_csv('model_output.csv')
```

```
[95]: dfp.columns
```

```
[95]: Index(['GLOBALEVENTID', 'SQLDATE', 'MonthYear', 'Year', 'FractionDate',
             'Actor1Code', 'Actor1Name', 'Actor1CountryCode', 'Actor1KnownGroupCode',
             'Actor1EthnicCode', 'Actor1Religion1Code', 'Actor1Religion2Code',
             'Actor1Type1Code', 'Actor1Type2Code', 'Actor1Type3Code', 'Actor2Code',
             'Actor2Name', 'Actor2CountryCode', 'Actor2KnownGroupCode',
             'Actor2EthnicCode', 'Actor2Religion1Code', 'Actor2Religion2Code',
             'Actor2Type1Code', 'Actor2Type2Code', 'Actor2Type3Code', 'IsRootEvent',
             'EventCode', 'EventBaseCode', 'EventRootCode', 'QuadClass',
             'GoldsteinScale', 'NumMentions', 'NumSources', 'NumArticles', 'AvgTone',
             'Actor1Geo_Type', 'Actor1Geo_FullName', 'Actor1Geo_CountryCode',
             'Actor1Geo_ADM1Code', 'Actor1Geo_ADM2Code', 'Actor1Geo_Lat',
             'Actor1Geo_Long', 'Actor1Geo_FeatureID', 'Actor2Geo_Type',
             'Actor2Geo_FullName', 'Actor2Geo_CountryCode', 'Actor2Geo_ADM1Code',
             'Actor2Geo_ADM2Code', 'Actor2Geo_Lat', 'Actor2Geo_Long',
             'Actor2Geo_FeatureID', 'ActionGeo_Type', 'ActionGeo_FullName',
             'ActionGeo_CountryCode', 'ActionGeo_ADM1Code', 'ActionGeo_ADM2Code',
             'ActionGeo_Lat', 'ActionGeo_Long', 'ActionGeo_FeatureID', 'DATEADDED',
             'SOURCEURL', 'Actor1__model_time_in_ms',
             'Actor1_release_harness_version', 'Actor1_release_model_version',
             'Actor1_release_model_version_number', 'Actor1_request_id',
             'Actor1_result_class1', 'Actor1_result_class2', 'Actor1_timing',
             'Actor2__model_time_in_ms', 'Actor2_release_harness_version',
             'Actor2_release_model_version', 'Actor2_release_model_version_number',
             'Actor2_request_id', 'Actor2_result_class1', 'Actor2_result_class2',
             'Actor2_timing'],
            dtype='object')
```

```
[58]: dfp.head()
```

[58]:
```
   GLOBALEVENTID    SQLDATE  MonthYear  Year  FractionDate Actor1Code  \
0      838788881  4/16/2018     201804  2018     2018.2904        EDU
1      838788882  4/16/2018     201804  2018     2018.2904        EDU
2      838788884  4/16/2018     201804  2018     2018.2904        GOV
3      838788885  4/16/2018     201804  2018     2018.2904        GOV
4      838788886  4/16/2018     201804  2018     2018.2904        GOV

   Actor1Name Actor1CountryCode Actor1KnownGroupCode Actor1EthnicCode  ...  \
0   ECONOMIST               NaN                  NaN              NaN  ...
1     STUDENT               NaN                  NaN              NaN  ...
2  GOVERNMENT               NaN                  NaN              NaN  ...
3  GOVERNMENT               NaN                  NaN              NaN  ...
4      MINIST               NaN                  NaN              NaN  ...

  Actor1_result_class2 Actor1_timing Actor2__model_time_in_ms  \
0                    3      0.078201                     1001
1                    0      0.079155                        0
2                    3      0.120401                     1001
3                    3      0.074387                        0
4                    3      0.069141                        0

  Actor2_release_harness_version  Actor2_release_model_version  \
0                            0.1      5ec427ae4cedfd0008830f07
1                            0.1      5ec427ae4cedfd0008830f07
2                            0.1      5ec427ae4cedfd0008830f07
3                            0.1      5ec427ae4cedfd0008830f07
4                            0.1      5ec427ae4cedfd0008830f07

  Actor2_release_model_version_number Actor2_request_id Actor2_result_class1  \
0                                   4  RSFCLN4EK35XOU0V                 True
1                                   4  RHC58LU0X41VKWE2                 True
2                                   4  FHZU2BCO10AY9LIS                 True
3                                   4  3FQ158RWS97IJCLH                 True
4                                   4  BMWNI3P4LV6FSJUR                False

  Actor2_result_class2 Actor2_timing
0                    3   1001.194239
1                    4      0.066280
2                    3   1001.168489
3                    3      0.053406
4                    3      0.045300

[5 rows x 77 columns]
```

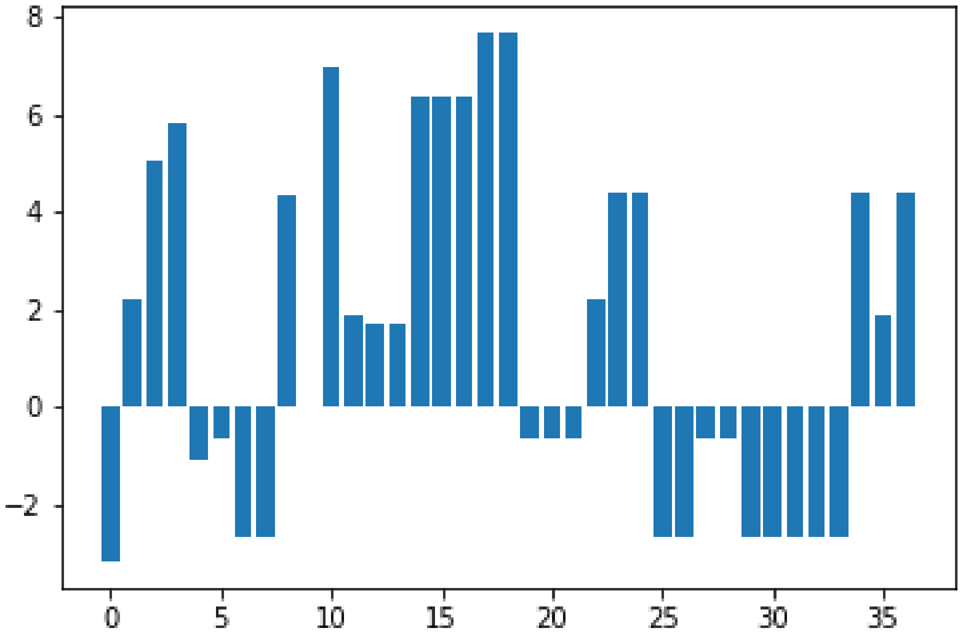
[91]:
```
actor1_name = 'EDU'
y_avgTone = list(dfp[dfp['Actor1Code'] == actor1_name]['AvgTone'])
```

[92]:

```
plt.bar(range(len(y_avgTone)), y_avgTone)
```

[92]:

```
<BarContainer object of 37 artists>
```



[ ]:

```
# Most Common Actors
```

[93]:

```
from collections import Counter
counter = Counter(dfp[dfp['Actor1Code'] == actor_name]['Actor2Code'])
counter.most_common(n=5)
```

[93]:

```
[('USA', 16), ('CAN', 3), ('GOV', 2), ('BUS', 2), ('LEG', 2)]
```

[ ]:

```

```

[105]:

```
actor_code = 'USA'

actor_df = dfp[(
    dfp['Actor1Code'] == actor_code) |
    (dfp['Actor2Code'] == actor_code)
][['GLOBALEVENTID', 'Actor1Code', 'Actor2Code', 'AvgTone',␣
 ↪'Actor1_result_class1', 'Actor1_result_class2', 'Actor2_result_class1',␣
 ↪'Actor2_result_class2']]
```

[106]:

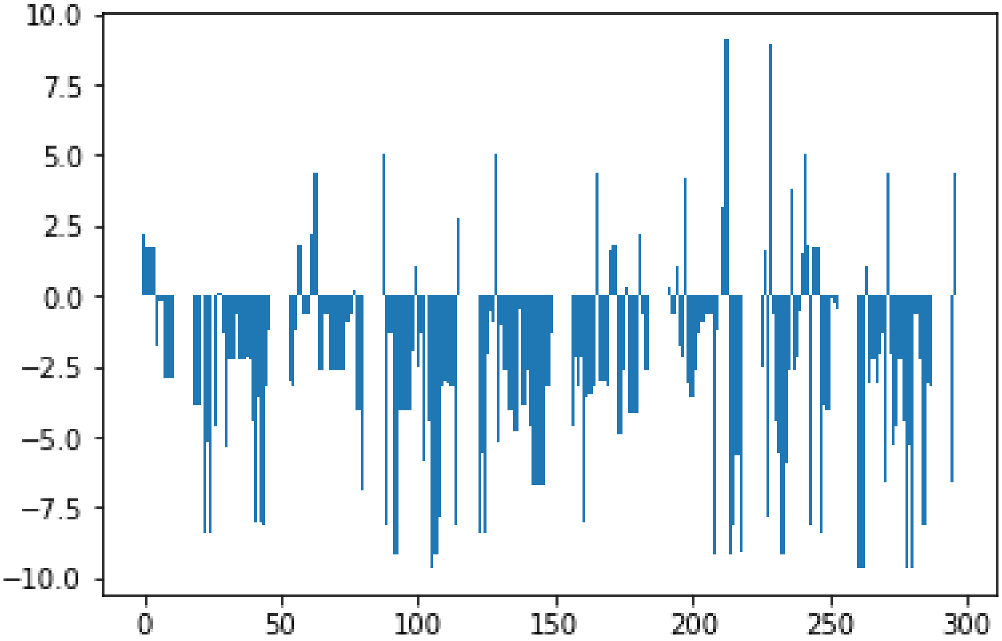
```
actor_df.head(5)
```

```
[106]:     GLOBALEVENTID Actor1Code Actor2Code   AvgTone  Actor1_result_class1  \
       1       838788882        EDU        USA  2.214022                  True
       8       838788896        USA        OPP  1.692748                  True
       9       838788897        USA        OPP  1.692748                  True
       10      838788898        USA        OPP  1.692748                  True
       11      838788899        USA        OPP  1.692748                  True

           Actor1_result_class2  Actor2_result_class1  Actor2_result_class2
       1                      0                  True                     4
       8                      4                  True                     1
       9                      4                  True                     1
       10                     4                  True                     1
       11                     4                  True                     1
```

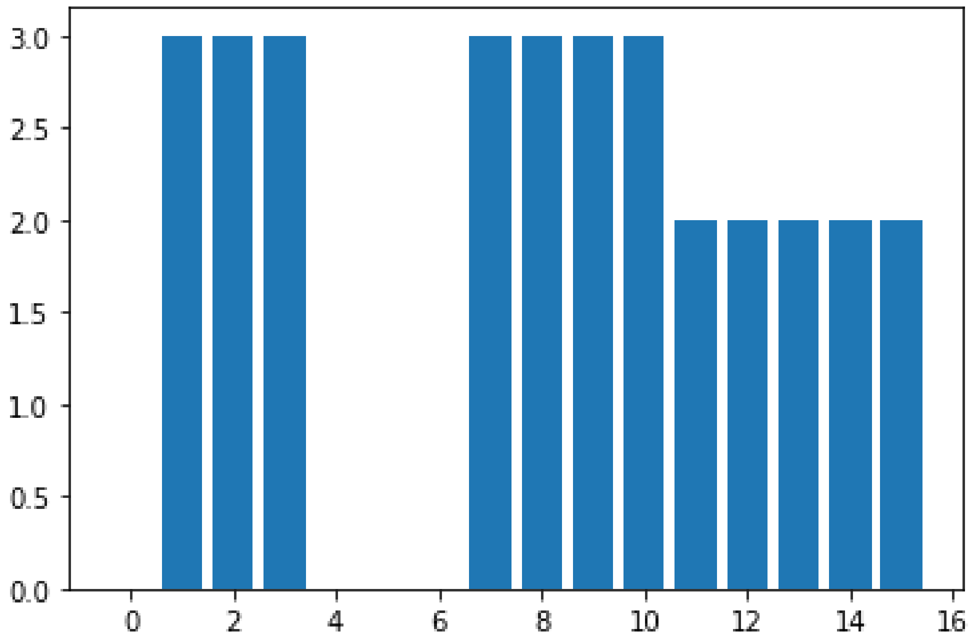
```
[109]: y = list(actor_df['AvgTone'])
       plt.bar(range(len(y)), y)
```

```
[109]: <BarContainer object of 296 artists>
```



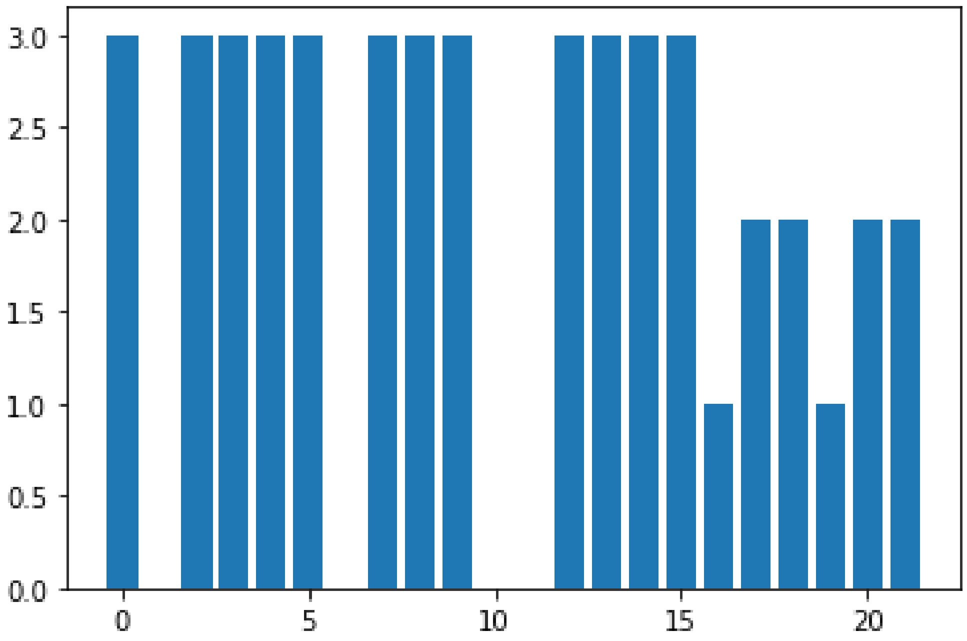
```
[111]: y = list(actor_df[actor_df['Actor1Code'] == actor_name]['Actor1_result_class2'])
       plt.bar(range(len(y)), y)
```

```
[111]: <BarContainer object of 16 artists>
```



```
[112]: y = list(actor_df[actor_df['Actor2Code'] == actor_name]['Actor2_result_class2'])
       plt.bar(range(len(y)), y)
```

```
[112]: <BarContainer object of 22 artists>
```


3.0
2.5
2.0
1.5
1.0
0.5
0.0
0
5
10
15
20