In [54]:
```
import pandas as pd
import matplotlib.pyplot as plt
```

In [55]:
```
df = pd.read_csv('polarity_monkeypox.csv')
df
```

. . .

In [56]:
```
df['Date'] = pd.to_datetime(df['Date'],format='%Y/%m/%d')
df['Date_inMonth'] = df['Date'].dt.to_period('m')
```

```
C:\Users\HasanChalhoub\Documents\Anaconda\lib\site-packages\pandas\core\arrays
\datetimes.py:1162: UserWarning: Converting to PeriodArray/Index representation
will drop timezone information.
  warnings.warn(
```

In [57]:
```
df
```

Out[57]:

	Unnamed: 0	Date	Username	Location	Verified	Hashtag	
0	0	2022-08-17 23:57:12+00:00	darkcobrabws	NaN	False	NaN	@eastcoastH @GovCan You guys are
1	1	2022-08-17 23:46:13+00:00	CMANN66	Winnipeg	False	NaN	@MBG need compliance Monk
2	2	2022-08-17 23:31:58+00:00	1215Deb	Virginia, USA	False	NaN	@ajwhitewo friend, who anc

In [58]:
```
grouped = df.groupby(by='Date_inMonth')['sentiment'].value_counts()
grouped
```

Out[58]:
```
Date_inMonth  sentiment
2022-04       Negative      129
              Positive      125
              Neutral        33
2022-05       Negative     5219
              Positive     3876
              Neutral       285
2022-06       Negative     2168
              Positive     1657
              Neutral       150
2022-07       Negative     7038
              Positive     4550
              Neutral       177
2022-08       Negative     4929
              Positive     3292
              Neutral       141
Name: sentiment, dtype: int64
```

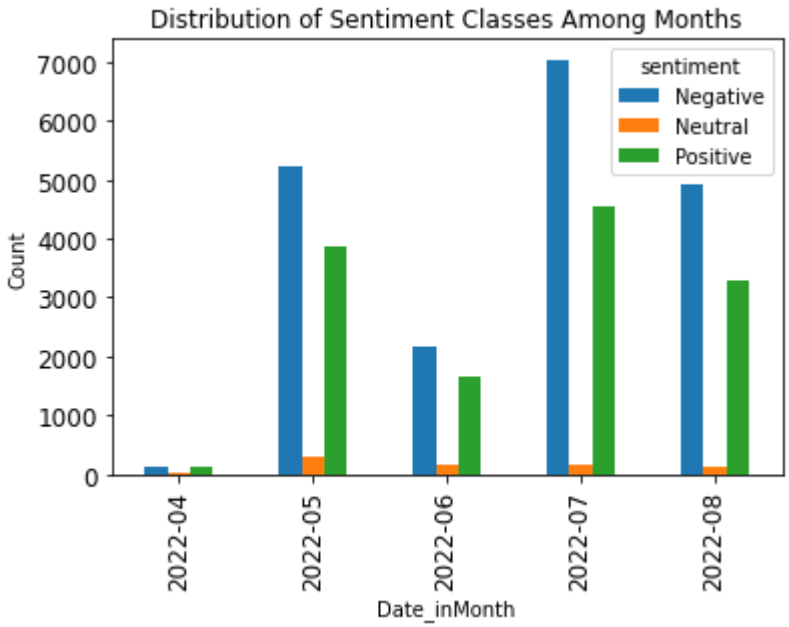
In [59]:
```
unstacked = grouped.unstack(level=1)
unstacked
```

Out[59]:

sentiment	Negative	Neutral	Positive
Date_inMonth			
2022-04	129	33	125
2022-05	5219	285	3876
2022-06	2168	150	1657
2022-07	7038	177	4550
2022-08	4929	141	3292

In [83]:
```
unstacked.plot.bar(title='Distribution of Sentiment Classes Among Months',xlabel=
```

Out[83]:
```
<AxesSubplot:title={'center':'Distribution of Sentiment Classes Among Months'},
xlabel='Date_inMonth', ylabel='Count'>
```



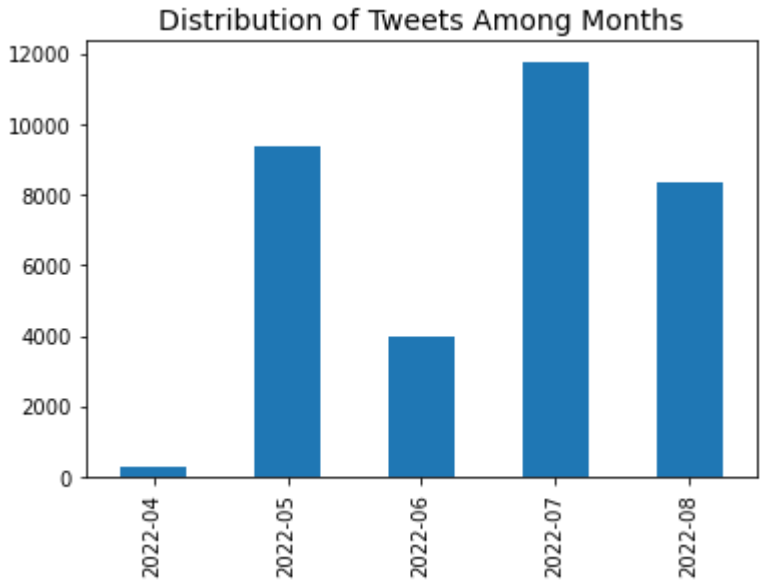
In [43]:
```
s = pd.to_datetime(pd.Series(df['New_Date']), format='%Y/%m/%d')
s.index = s.dt.to_period('m')
s = s.groupby(level=0).size()

s = s.reindex(pd.period_range(s.index.min(), s.index.max(), freq='m'), fill_value
print (s)
```

```
2022-04      287
2022-05     9380
2022-06     3975
2022-07    11765
2022-08     8362
Freq: M, Name: New_Date, dtype: int64
```

In [76]:
```
plt.title('Distribution of Tweets Among Months', fontsize=14)
s.plot.bar()
```

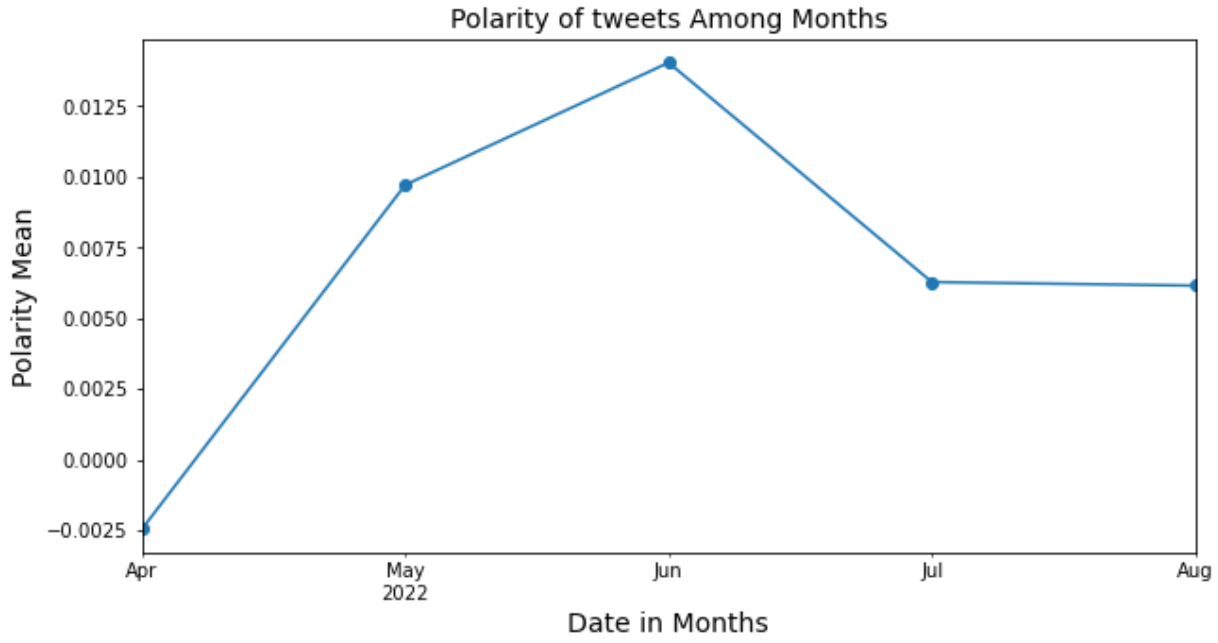
Out[76]: <AxesSubplot:title={'center':'Distribution of Tweets Among Months'}>



In [61]:
```
grouped_1 = df.groupby(by='Date_inMonth')['polarity'].mean()
grouped_1
```

Out[61]:
```
Date_inMonth
2022-04   -0.002454
2022-05    0.009721
2022-06    0.014045
2022-07    0.006285
2022-08    0.006157
Freq: M, Name: polarity, dtype: float64
```

In [75]:
```
plt.figure(figsize=(10,5))
grouped_1.plot(marker='o')
plt.title('Polarity of tweets Among Months', fontsize=14)
plt.xlabel('Date in Months', fontsize=14)
plt.ylabel('Polarity Mean', fontsize=14)
plt.show()
```



In [ ]: