instagram_questions

April 15, 2019

```
In [1]: import json
        import pandas as pd
        import requests
        from ipywidgets import Image
        import math
        import re
        import operator
        from wordcloud import WordCloud, STOPWORDS
        import matplotlib.pyplot as plt
        from IPython.display import display
```

```
In [2]: def dict_sort_des(diction):
            sorted_d = sorted(diction.items(), key=operator.itemgetter(1),reverse=True)
            return sorted_d

        def wordcloud_plot(text, colour):
            wordcloud = WordCloud(
                width = 3000,
                height = 2000,
                background_color = colour,
                stopwords = STOPWORDS).generate(str(text))

            fig = plt.figure(
                figsize = (40, 30),
                facecolor = 'k',
                edgecolor = 'k')

            plt.imshow(wordcloud, interpolation = 'bilinear')
            plt.axis('off')
            plt.tight_layout(pad=0)
            return plt.show()

        def clean_tweet(tweet):
            return ' '.join(re.sub(r"(@[A-Za-z0-9]+)|([^0-9A-Za-z \t])|(\w+:\/\/\S+)", " ", twee
```

```
In [21]: with open('incindia.json', 'r') as myfile:
             data=myfile.read()
         obj = json.loads(data)
```

```
In [22]: max_like = -100
         maxl_index = -1
         max_comments = -100
         maxc_index = -1
         for k in obj['posts']:
             l = k['likes']['count']
             if (l) > max_like:
                 max_like = l
                 maxl_index = obj['posts'].index(k)
             if k['comments']['count']>max_comments:
                 max_comments = k['comments']['count']
                 maxc_index = obj['posts'].index(k)
         print("Most liked post ID:", obj['posts'][maxl_index]['url'].split('/')[-2])
         print("Most commented post ID:",obj['posts'][maxc_index]['url'].split('/')[-2])
```

```
Most liked post ID: Bs-IxK3FTIx
Most commented post ID: BvThii1FXva
```

0.1 Most liked post.

```
In [5]: Image(value=requests.get(obj['posts'][maxl_index]['preview_img']).content)
```

0.2 Most commented post.

```
In [6]: Image(value=requests.get(obj['posts'][maxc_index]['preview_img']).content)
```

0.3 Popularity score -> log(views)+log(likes)+comments

```
In [24]: post_list = obj['posts']
         top_five_indices = []
         for j in range(5):
             max_score = -100
             max_index = -1
             for k in post_list:
         #         print(k)
                 l = math.log(k['likes']['count']+1) + math.log(k['views']+1)+k['comments']['cou
                 if l>max_score:
                     max_score = l
                     max_index = obj['posts'].index(k)
             top_five_indices.append(obj['posts'][max_index])
             post_list.remove(obj['posts'][max_index])
```

```
In [25]: for k in top_five_indices:
             display(Image(value=requests.get(k['preview_img']).content))
             print(k['url'])
```

```
https://www.instagram.com/p/Bvq9BVglw9s/
https://www.instagram.com/p/Bu_EcqUlfaY/
```

```
https://www.instagram.com/p/Bvq0W3EFjG4/
https://www.instagram.com/p/ButZczFlPvG/
https://www.instagram.com/p/BrVjX9HFyA6/
```

```
In [9]: hash_list = []
        for k in obj['posts']:
            if len(k['comments']['list']):
                text = k['comments']['list'][0]['comment']
                hash_list.extend(re.findall(r"#(\w+)", text))
        hash_dict = {}
        for j in hash_list:
                if j not in hash_dict.keys():
                    hash_dict[j] = 1
                else:
                    hash_dict[j] += 1
        print(dict_sort_des(hash_dict)[:5])
```

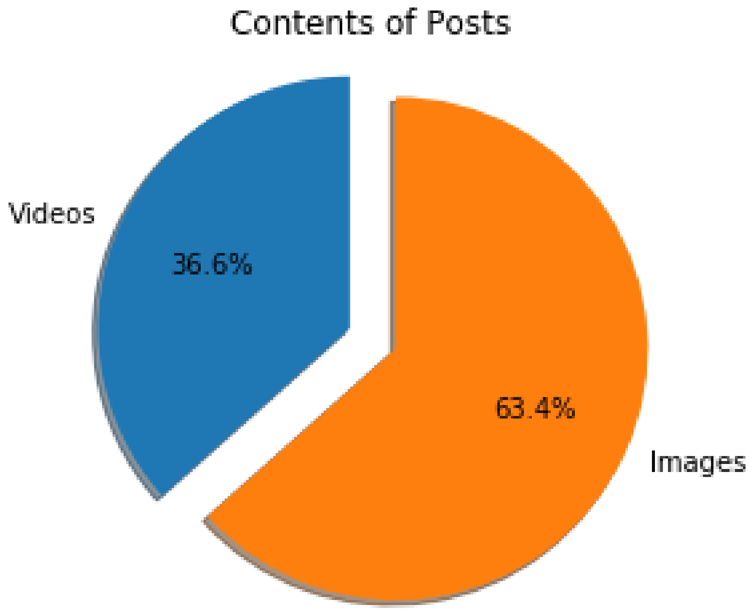
```
[('Congress', 56), ('India', 33), ('NoMo', 23), ('BJP', 20), ('CongressManifesto2019', 17)]
```

```
In [10]: with open('bjp4india.json', 'r') as myfile:
             data=myfile.read()
         obj = json.loads(data)
```

```
In [11]: video_count = 0
         for k in obj['posts']:
             if not len(k['imgs']):
                 video_count += 1
         "There are "+str(video_count) + " video posts."
```

```
Out[11]: 'There are 291 video posts.'
```

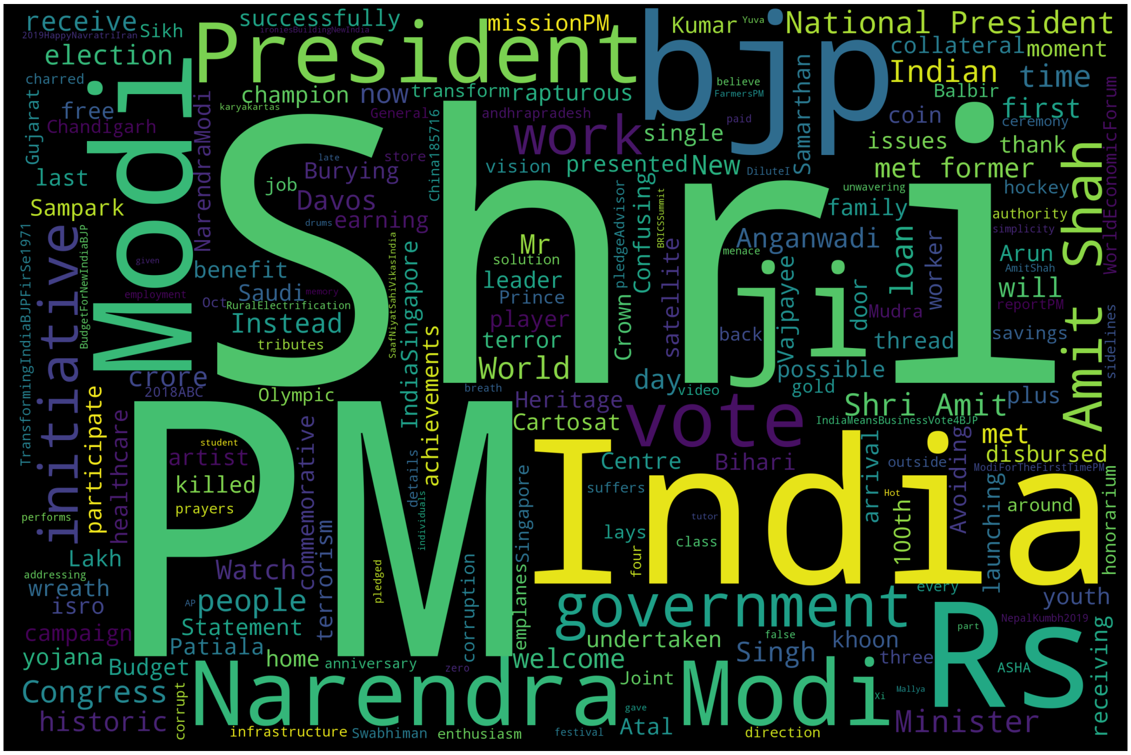
```
In [12]: labels = ['Videos', 'Images']
         sizes = [video_count, len(obj['posts'])-video_count]
         explode = (0.1, 0.1)

         fig1, ax1 = plt.subplots()
         ax1.pie(sizes, explode=explode, labels=labels, autopct='%1.1f%%',
                 shadow=True, startangle=90)
         ax1.axis('equal')
         ax1.set_title('Contents of Posts')
         plt.show()
```



```
In [13]: post_list = obj['posts']
         top_200_indices = []
         for j in range(200):
             max_score = -100
             max_index = -1
             for k in obj['posts']:
                 l = math.log(k['likes']['count']+1) + math.log(k['views']+1)+k['comments']['cou
                 if l>max_score:
                     max_score = l
                     max_index = obj['posts'].index(k)
             top_200_indices.append(max_index)
             del post_list[max_index]
         print(top_200_indices)
```

```
[794, 548, 486, 556, 236, 737, 697, 627, 142, 516, 384, 628, 529, 345, 573, 672, 201, 364, 740,
```

```
In [14]: text_content = ''
         for k in top_200_indices:
             try:
                 text_content += clean_tweet(obj['posts'][k]['comments']['list'][0]['comment'])
             except:
                 pass
         wordcloud_plot(text_content,'black')
```



The most occuring words are: 1. Shri - A title used to give respect to a person. It is because the BJP follows Hinduisitic(Hindu) style of writing. 2. BJP - The name of the party, it is used for emphasis and glorification of the party. 3. leader - Calling themselves strong leaders, especially, Shri Narendra Modi. 4. India - The country of the party, signifies Nationalist feelings of the party.

```
In [15]: hash_list = []
         for k in obj['posts']:
             if len(k['comments']['list']):
                 text = k['comments']['list'][0]['comment']
                 hash_list.extend(re.findall(r"#(\w+)", text))
         hash_dict = {}
         for j in hash_list:
                 if j not in hash_dict.keys():
                     hash_dict[j] = 1
                 else:
                     hash_dict[j] += 1
         print(dict_sort_des(hash_dict)[:5])
```

```
[('bjp', 23), ('india', 16), ('election', 12), ('vote', 10), ('BharatKeMannKiBaat', 7)]
```

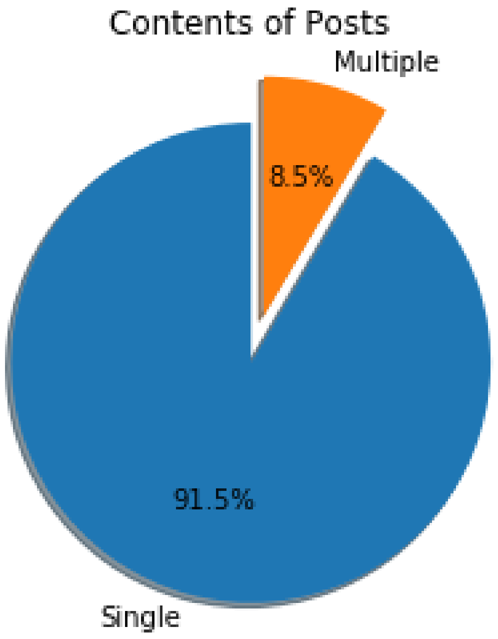
```
In [16]: with open('explore_2019-04-14 05-00-26.json', 'r') as myfile:
             data=myfile.read()
         obj = json.loads(data)
```

```
In [17]: post_list = obj[0]['posts']
         top_five_indices = []
         for j in range(5):
             max_score = -100
             max_index = -1
             for k in post_list:
         #         print(k)
                 l = math.log(k['likes']['count']+1) + math.log(k['views']+1)+k['comments']['cou
                 if l>max_score:
                     max_score = l
                     max_index = obj[0]['posts'].index(k)
             top_five_indices.append(obj[0]['posts'][max_index])
             post_list.remove(obj[0]['posts'][max_index])
         # print(top_five_indices)
```

```
In [18]: for k in top_five_indices:
             display(Image(value=requests.get(k['preview_img']).content))
             print(k['url'])
```

```
https://www.instagram.com/p/BwD_oGYnKSi/
https://www.instagram.com/p/BwM8tY2lcd0/
https://www.instagram.com/p/BwBviGNBcKF/
https://www.instagram.com/p/BwHijZqB7zA/
https://www.instagram.com/p/BwHnEUdncCb/
```

```
In [19]: single_count = 0
         multiple_count = 0
         for k in obj[0]['posts']:
             if (not len(k['imgs'])) or (len(k['imgs'])==1) :
                 single_count += 1
             else:
                 multiple_count += 1

         labels = ['Single', 'Multiple']
         sizes = [single_count, multiple_count]
         explode = (0.1, 0.1)

         fig1, ax1 = plt.subplots()
         ax1.pie(sizes, explode=explode, labels=labels, autopct='%1.1f%%',
                 shadow=True, startangle=90)
         ax1.axis('equal')
         ax1.set_title('Contents of Posts')
         plt.show()
```


Contents of Posts
Multiple
8.5%
91.5%
Single