Challenge

March 16, 2020

0.1 Challenge

1. Use python to read the csv file and create the following two charts:

   a. Pageviews by weeks for the segment

   b. Pageviews/user by day for the segment

```
In [1]: import pandas as pd
        import numpy as np
        import matplotlib.pyplot as plt
        %matplotlib inline
        plt.style.use('classic')
        import seaborn as sns
        sns.set()
```

```
In [2]: pageviews = pd.read_csv("/Users/--/Desktop/January 2019 pageviews.csv",
                                skiprows=5, sep=',', thousands=',', nrows=31)
```

```
In [3]: pageviews.head()
```

```
Out[3]:   Day Index  Pageviews
        0    1/1/19        229
        1    1/2/19        521
        2    1/3/19        467
        3    1/4/19        572
        4    1/5/19        426
```

```
In [4]: pageviews.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 31 entries, 0 to 30
Data columns (total 2 columns):
Day Index    31 non-null object
Pageviews    31 non-null int64
dtypes: int64(1), object(1)
memory usage: 576.0+ bytes
```

```
In [5]: pageviews['Day Index'] = pd.to_datetime(pageviews['Day Index'])
In [6]: pageviews.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 31 entries, 0 to 30
Data columns (total 2 columns):
Day Index    31 non-null datetime64[ns]
Pageviews    31 non-null int64
dtypes: datetime64[ns](1), int64(1)
memory usage: 576.0 bytes
```

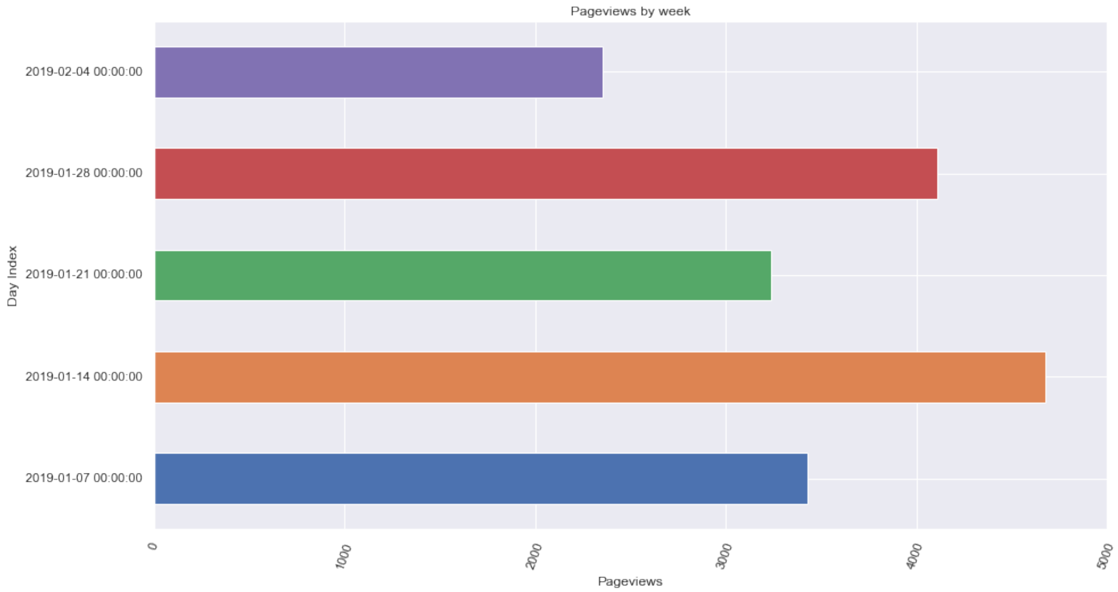
```
In [7]: new_pageviews = pageviews.groupby([
            pd.Grouper(key='Day Index',
                       freq='W-MON')])['Pageviews'].sum().reset_index().sort_values('Day Index
```

```
In [8]: new_pageviews
```

```
Out[8]:    Day Index  Pageviews
        0 2019-01-07       3431
        1 2019-01-14       4676
        2 2019-01-21       3240
        3 2019-01-28       4109
        4 2019-02-04       2355
```

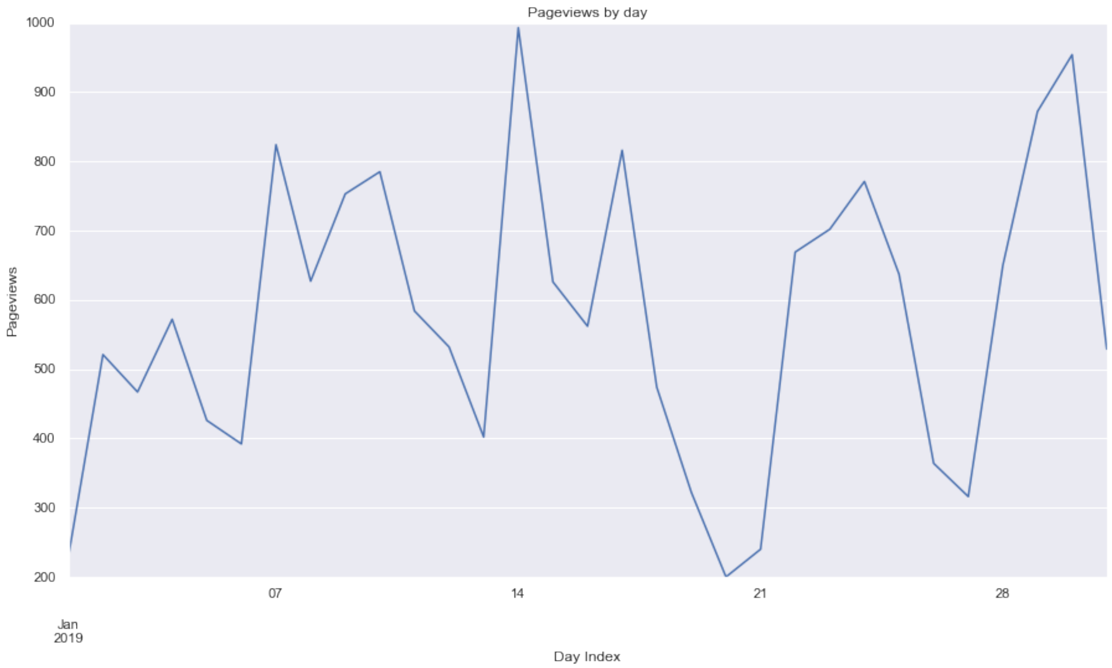
```
In [9]: new_pageviews.plot(kind='barh',
                    x='Day Index',
                    y='Pageviews',
                    figsize=(15, 8),
                    title='Pageviews by week',
                    legend=False)
        plt.xlabel('Pageviews')
        plt.ylabel('Day Index')
        plt.xticks(rotation=70)

        plt.savefig('pageviews.png')
```



```
In [10]: pageviews.plot(figsize=(15, 8),
                        x='Day Index',
                        y='Pageviews',
                        title='Pageviews by day',
                        legend=False)
         plt.ylabel('Pageviews')
         plt.xlabel('Day Index')
         plt.grid(True)

         plt.savefig('pageviews2.png')
```



```
In [11]: users = pd.read_csv("/Users/--/Desktop/January 2019 users.csv",
                                   skiprows=5, sep=',', thousands=',', nrows=31)
```

```
In [12]: users.head()
```

```
Out[12]:   Day Index  Users
         0    1/1/19     38
         1    1/2/19     98
         2    1/3/19     82
         3    1/4/19     88
         4    1/5/19     50
```

```
In [13]: users.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 31 entries, 0 to 30
Data columns (total 2 columns):
Day Index    31 non-null object
Users        31 non-null int64
dtypes: int64(1), object(1)
memory usage: 576.0+ bytes
```

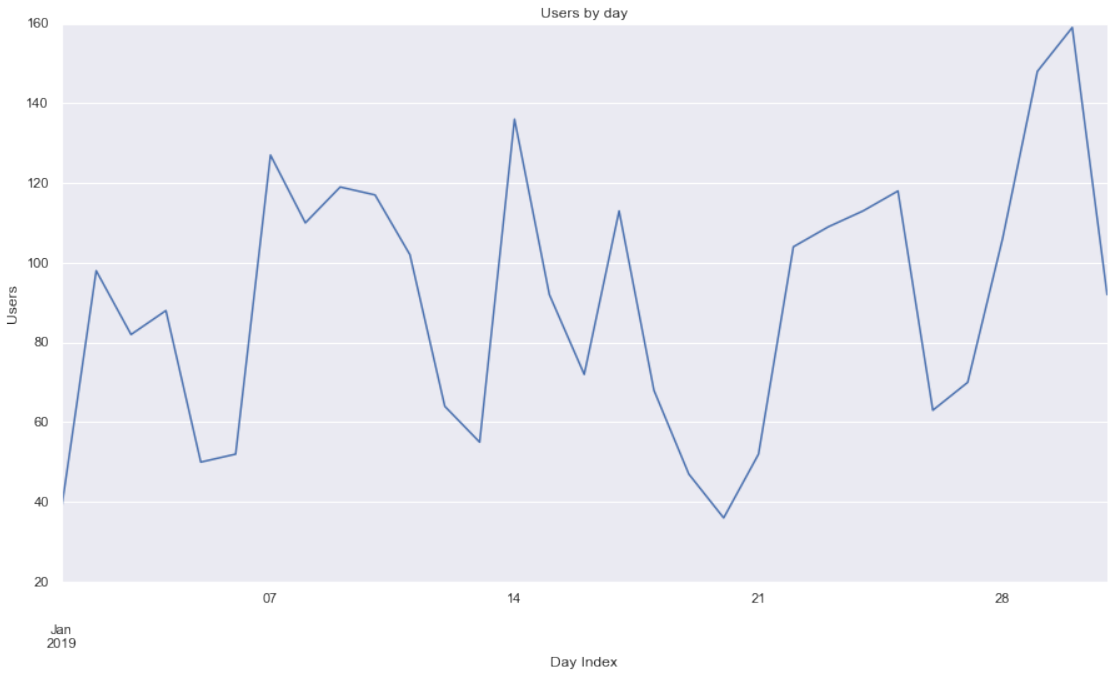
```
In [14]: users['Day Index'] = pd.to_datetime(users['Day Index'])
```

```
In [15]: users.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 31 entries, 0 to 30
Data columns (total 2 columns):
Day Index    31 non-null datetime64[ns]
Users        31 non-null int64
dtypes: datetime64[ns](1), int64(1)
memory usage: 576.0 bytes
```

```
In [16]: users.plot(figsize=(15, 8),
                    x='Day Index',
                    y='Users',
                    title='Users by day',
                    legend=False)
         plt.ylabel('Users')
         plt.xlabel('Day Index')
         plt.grid(True)

         plt.savefig('users.png')
```



```
In [ ]:
```