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◨ Customer-Service-Requests-. ✕

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Customer-Service-Requests-Analysis ¶

```
[1]:   ### import libraries
       import numpy as np
       import pandas as pd
       import matplotlib.pyplot as plt
       from matplotlib import style
       import seaborn as sns
       %matplotlib inline
```

```
[2]:   service311 = pd.read_csv ('311_Service_Requests_from_2010_to_Present.csv')
```

/usr/local/lib/python3.7/site-packages/IPython/core/interactiveshell.py:3063: DtypeWarning: Columns (48,49) have mixed types.Specify dtype option on import or s
et low_memory=False.
  interactivity=interactivity, compiler=compiler, result=result)

```
[3]:   service311.head()
```

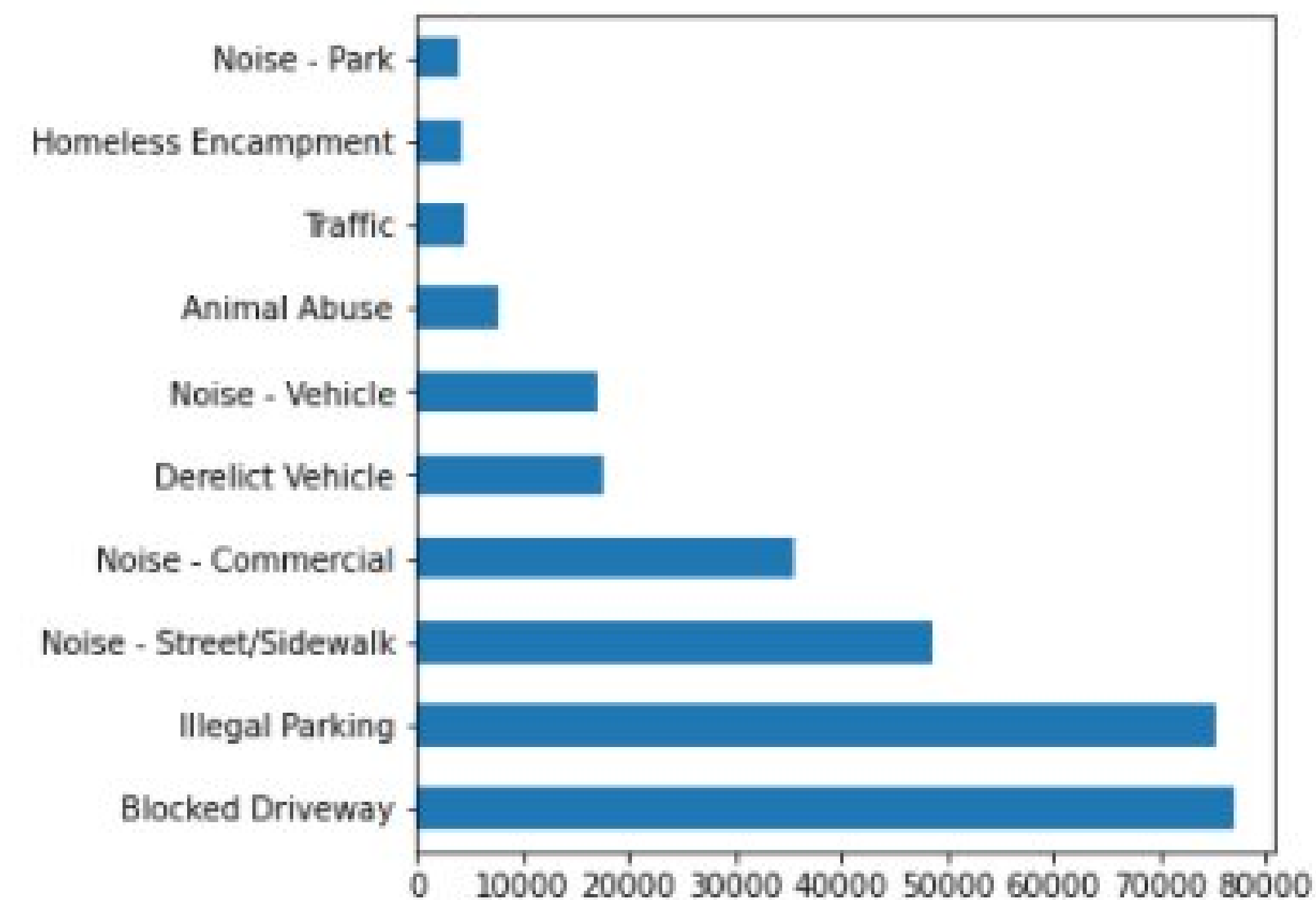| [3]:		Unique Key	Created Date	Closed Date	Agency	Agency Name	Complaint Type	Descriptor	Location Type	Incident Zip	Incident Address	...	Bridge Highway Name	Bridge Highway Direction	Road Ramp	Bridge Highway Segment	Garage Lot Name	Ferry Direction	Ferry Terminal Name
	0	32310363	12/31/2015 11:59:45 PM	01-01-16 0:55	NYPD	New York City Police Department	Noise - Street/Sidewalk	Loud Music/Party	Street/Sidewalk	10034.0	71 VERMILYEA AVENUE	...	NaN	NaN	NaN	NaN	NaN	NaN	NaN
	1	32309934	12/31/2015 11:59:44 PM	01-01-16 1:26	NYPD	New York City Police Department	Blocked Driveway	No Access	Street/Sidewalk	11105.0	27-07 23 AVENUE	...	NaN	NaN	NaN	NaN	NaN	NaN	NaN
	2	32309159	12/31/2015 11:59:29 PM	01-01-16 4:51	NYPD	New York City Police Department	Blocked Driveway	No Access	Street/Sidewalk	10458.0	2897 VALENTINE AVENUE	...	NaN	NaN	NaN	NaN	NaN	NaN	NaN
	3	32305098	12/31/2015 11:57:46 PM	01-01-16 7:43	NYPD	New York City Police Department	Illegal Parking	Commercial Overnight Parking	Street/Sidewalk	10461.0	2940 BAISLEY AVENUE	...	NaN	NaN	NaN	NaN	NaN	NaN	NaN

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```python
#Complaint type Breakdown with bar plot to figure out majority of complaint types and top 10 complaints
service311['Complaint Type'].value_counts().head(10).plot(kind='barh',figsize=(5,5));
```



```python
service311.groupby(["Borough","Complaint Type","Descriptor"]).size()
```

```
Borough      Complaint Type        Descriptor
BRONX        Animal Abuse          Chained                    132
                                   In Car                      36
                                   Neglected                  673
                                   No Shelter                  71
                                   Other (complaint details)  311
                                                              ...
Unspecified  Noise - Vehicle       Engine Idling               11
             Posting Advertisement Vehicle                      1
             Traffic               Truck Route Violation        1
             Vending               In Prohibited Area           2
                                   Unlicensed                   5
Length: 288, dtype: int64
```

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Customer-Service-Requests- ✕
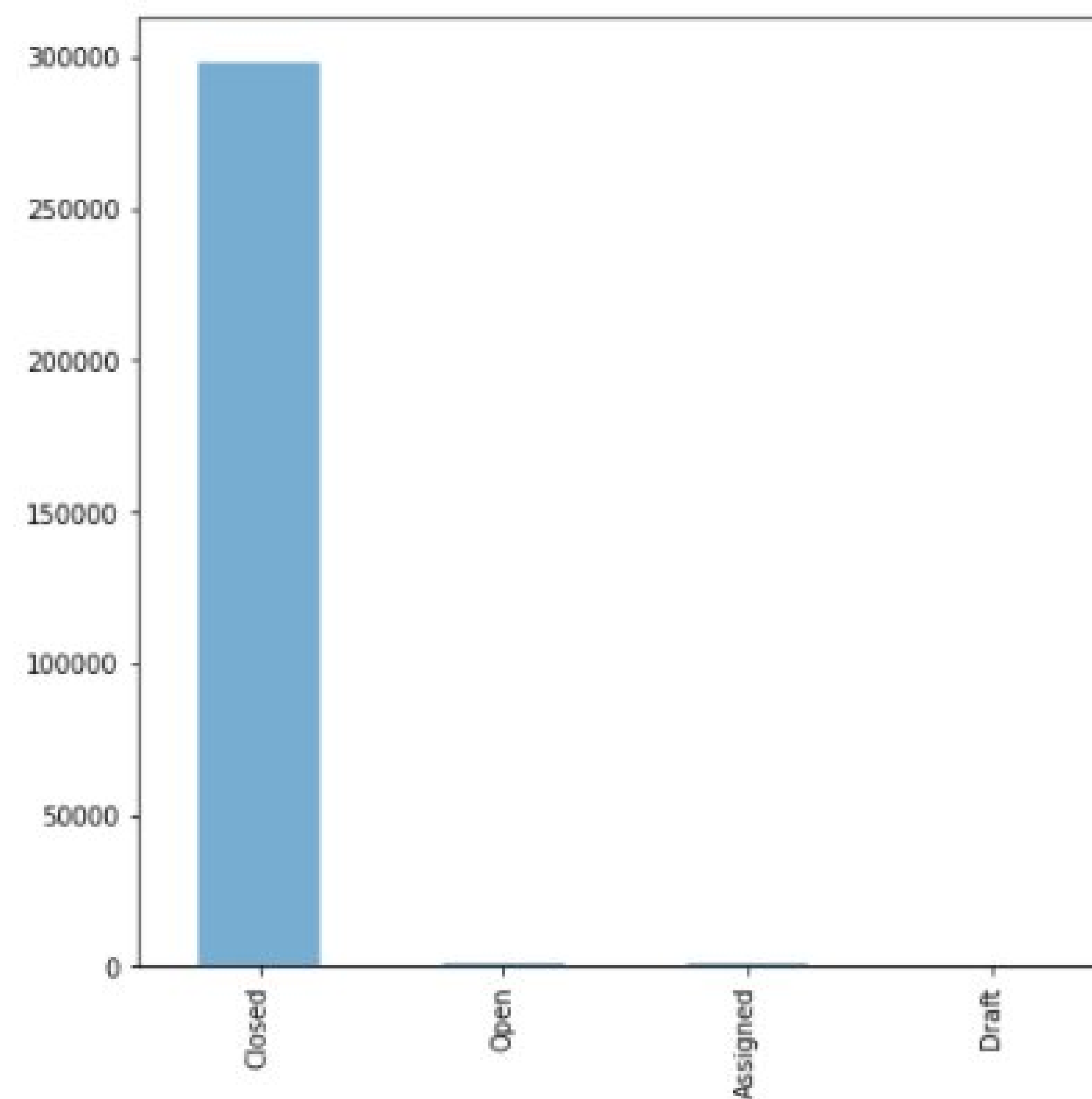
Markdown ⌄   Python 3 ○

```
            interactivity=interactivity, compiler=compiler, result=result)
```

[12]: `df["Request_Closing_Time"] = df["Closed Date"] - df["Created Date"]`

[13]:
```python
#Have a look at the status of tickets
df['Status'].value_counts().plot(kind='bar',alpha=0.6,figsize=(7,7))
plt.show()
```


[14]:
```python
#Complaint type Breakdown with bar plot to figure out majority of complaint types and top 10 complaints
service311['Complaint Type'].value_counts().head(10).plot(kind='barh',figsize=(5,5));
```