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comcast.ipynb

[3]: comcast_df.head(3)

	Ticket #	Customer Complaint	Date	Date_month_year	Time	Received Via	City	State	Zip code	Status	Filing on Behalf of Someone
0	250635	Comcast Cable Internet Speeds	22-04-15	22-Apr-15	3:53:50 PM	Customer Care Call	Abingdon	Maryland	21009	Closed	No
1	223441	Payment disappear - service got disconnected	04-08-15	04-Aug-15	10:22:56 AM	Internet	Acworth	Georgia	30102	Closed	No
2	242732	Speed and Service	18-04-15	18-Apr-15	9:55:47 AM	Internet	Acworth	Georgia	30101	Closed	Yes

[4]: comcast_df.describe()

[4]: Zip code

count	2224.000000
mean	47994.393435
std	28885.279427
min	1075.000000
25%	30056.500000
50%	37211.000000
75%	77058.750000
max	99223.000000

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Name	Last Modified
Comcast_te...	7 days ago
comcast.ipynb	2 minutes ago
factorial.ipynb	3 years ago
IBM_Employ...	3 years ago
README.md	3 years ago
resource	3 years ago

comcast.ipynb

Code

Python 3

```
[5]: ## - Provide the trend chart for the number of complaints at monthly and daily granularity levels.

comcast_df['Month']=pd.to_datetime(comcast_df['Date_month_year']).dt.month_name()
comcast_df['Date']=pd.to_datetime(comcast_df['Date_month_year']).dt.day

## Graph for date wise
comcast_df.groupby(['Date'])['Customer Complaint'].count().plot(kind='bar',color="lightgreen",edgecolor="darkgreen",)
plt.show()

## Graph for month wise
comcast_df.groupby(['Month'])['Customer Complaint'].count().plot(kind='bar',color="yellow",edgecolor="orange")
plt.show()
```

Date	Count
4	210
5	135
6	270
7	70
8	55
9	60
10	60
11	60
12	60
13	55
14	55
15	55
16	60
17	60
18	70
19	55
20	55
21	45
22	70
23	225
24	250
25	130
26	95
27	85
28	85
29	90
30	90

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Date

Python 3

Code

Month

April August December February January July June March May November October September

1000
800
600
400
200
0

[6]: *## - Provide a table with the frequency of complaint types.*

```
comcast_df['Customer Complaint'].value_counts().to_frame().reset_index()
```

	index	Customer Complaint
0	Comcast	83
1	Comcast Internet	18
2	Comcast Data.Cap	17

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Python 3

[6]: *## - Provide a table with the frequency of complaint types.*

```
comcast_df['Customer Complaint'].value_counts().to_frame().reset_index()
```

	index	Customer Complaint
0	Comcast	83
1	Comcast Internet	18
2	Comcast Data Cap	17
3	comcast	13
4	Comcast Billing	11
...
1836	Repeated issues with Comcast billing and custo...	1
1837	Comcast- Unfair Pricing Tactics	1
1838	Issues with Cable and Internet Packaging Unfai...	1
1839	Comcast Internet/Cable TV package	1
1840	bills/identity	1

1841 rows × 2 columns

[7]: *## - Which complaint types are maximum i.e., around internet, network issues, or across any other domains.*

```
comcast_df['Customer Complaint'].value_counts().head(5)
```

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Python 3

[7]: `## - Which complaint types are maximum i.e., around internet, network issues, or across any other domains.`
comcast_df['Customer Complaint'].value_counts().head(5)

[7]:

Complaint Type	Count
Comcast	83
Comcast Internet	18
Comcast Data Cap	17
comcast	13
Comcast Billing	11

Name: Customer Complaint, dtype: int64

[8]: `## - Create a new categorical variable with value as Open and Closed. Open & Pending is to be categorized as Open and ## Closed & Solved is to be categorized as Closed.`
comcast_df['Status']=comcast_df['Status'].apply(lambda x: 'Open' if ((x=='Open') | (x=='Pending')) else 'Closed')

[9]: `## - Provide state wise status of complaints in a stacked bar chart. Use the categorized variable from Q3.`
opn=comcast_df[comcast_df['Status']=='Open'].groupby(['State'])['Status'].count().to_frame().reset_index()
clos=comcast_df[comcast_df['Status']=='Closed'].groupby(['State'])['Status'].count().to_frame().reset_index()

fig=plt.figure(figsize=(15,15))
plt.bart(clos.State, clos.Status)
plt.bart(opn.State, opn.Status)
plt.ylabel("State")
plt.xlabel("Status Count")
plt.legend(["closed", "open"])
plt.title("State wise Status Count")

plt.show()

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Python 3

Code

- Provide state wise status of complaints in a stacked bar chart. Use the categorized variable from Q3.

```
open=comcast_df[comcast_df['Status']=='Open'].groupby(['State'])['Status'].count().to_frame().reset_index()
clos=comcast_df[comcast_df['Status']=='Closed'].groupby(['State'])['Status'].count().to_frame().reset_index()

fig=plt.figure(figsize=(15,15))
plt.barh(clos.State, clos.Status)
plt.barh(open.State, open.Status)
plt.ylabel("State")
plt.xlabel("Status Count")
plt.legend(["closed", "open"])
plt.title("State wise Status Count")

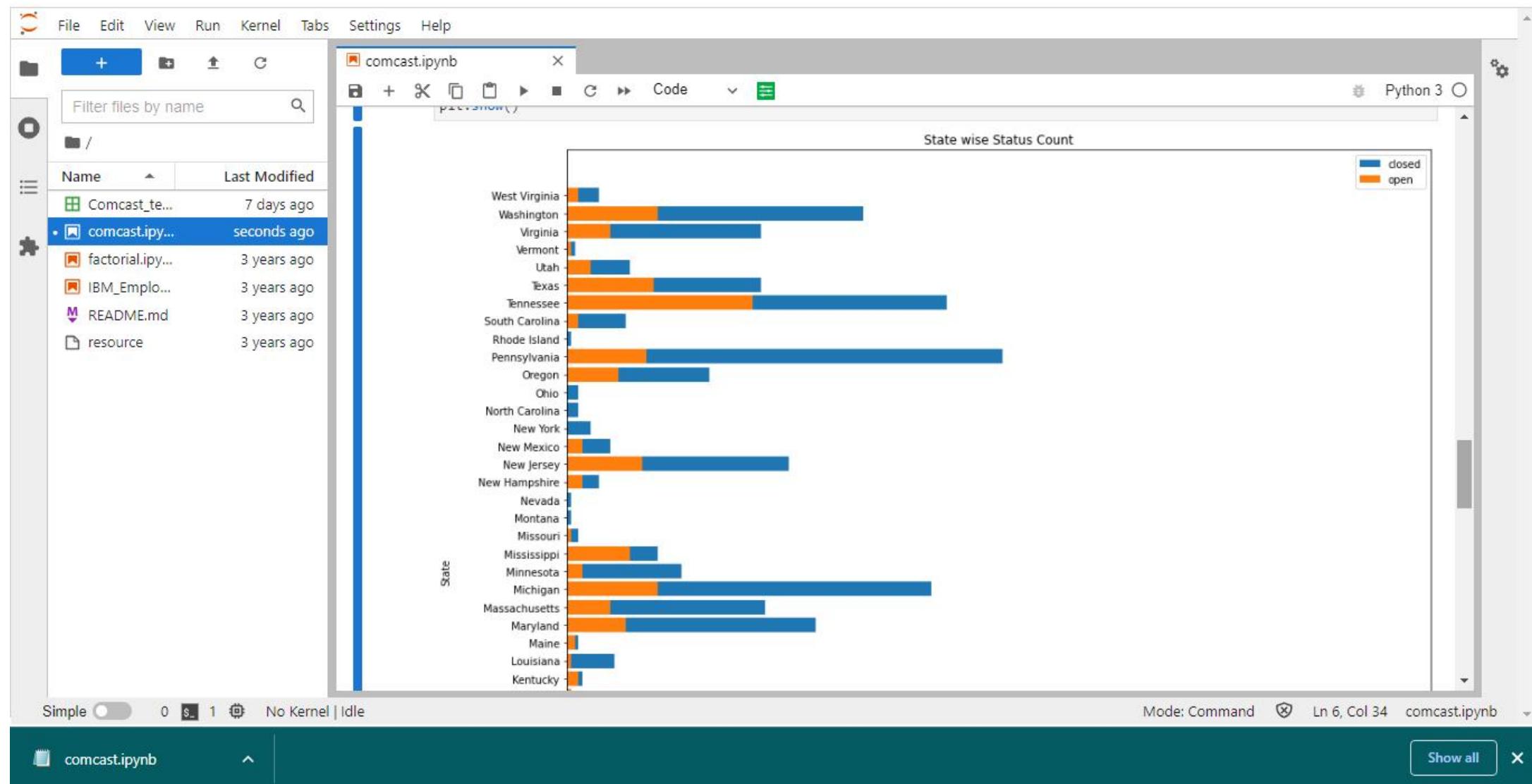
plt.show()
```

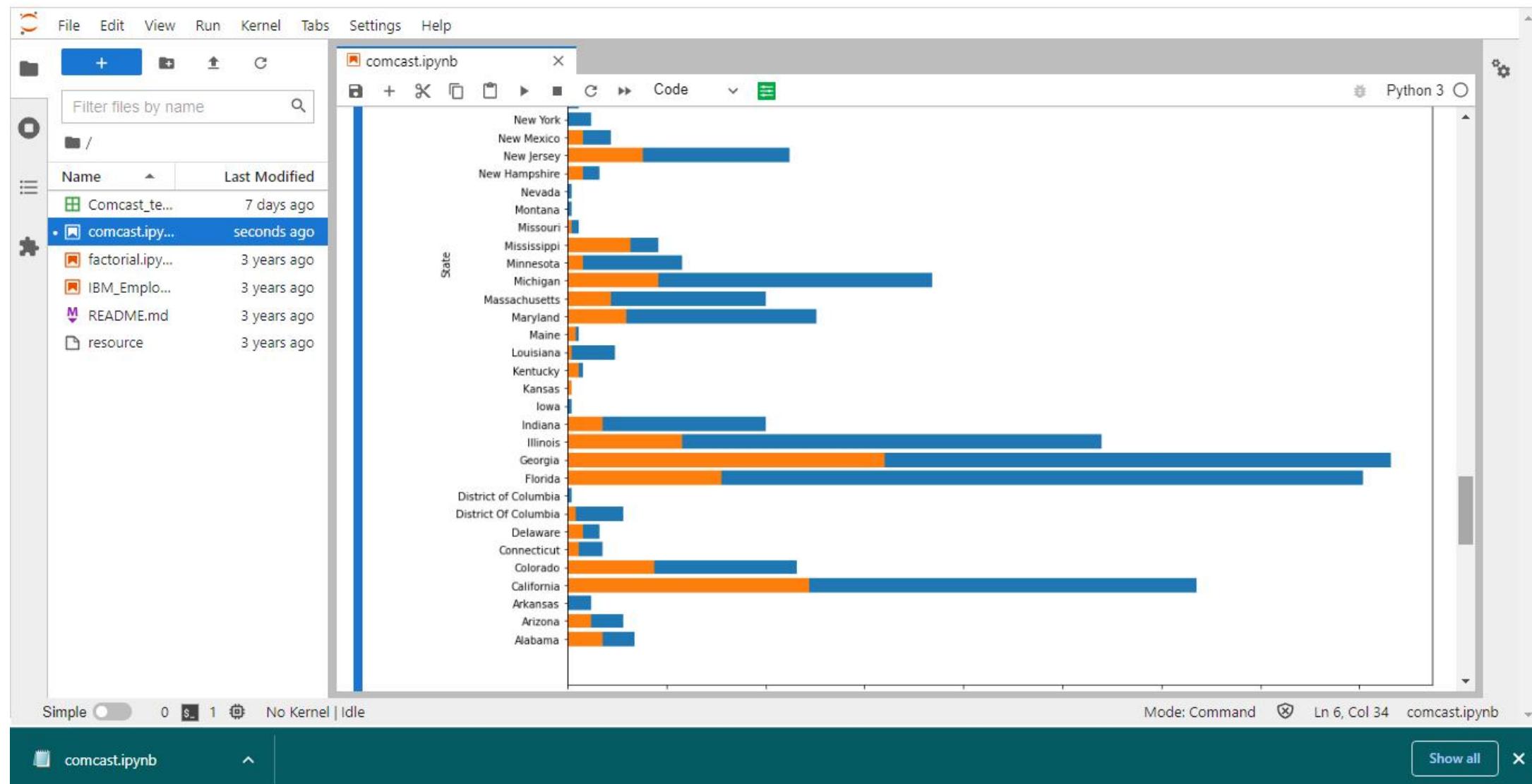
State wise Status Count

State	closed	open
West Virginia	~10	~2
Washington	~45	~15
Virginia	~35	~10
Vermont	~5	~1
Utah	~10	~5
Texas	~30	~15
Tennessee	~50	~25
South Carolina	~10	~5
Rhode Island	~5	~1
Pennsylvania	~70	~20
Oregon	~15	~10
Ohio	~5	~1
North Carolina	~5	~1
New York	~10	~5
New Mexico	~40	~10

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Status Count

Python 3

[10]: ## Which state has the maximum complaints

```
comcast_df.groupby("State")['Customer Complaint'].agg("count").sort_values(ascending=False).head(1)
```

[10]: State
Georgia 288
Name: Customer Complaint, dtype: int64

[11]: ## Which state has the highest percentage of unresolved complaints

```
State_Unsolved=comcast_df.loc[comcast_df['Status']=='Open',['State']].value_counts()  
State_Unsolved.head(1)/State_Unsolved.sum()*100
```

[11]: State
Georgia 15.473888
dtype: float64

[12]: # Provide the percentage of complaints resolved till date, which were received through the Internet and customer care calls.

```
comcast_df[comcast_df['Status']=='Closed'].groupby('Status')['Received Via'].value_counts(normalize=True)*100
```

[12]: Status Received Via
Closed Customer Care Call 50.615114
Internet 49.384886
Name: Received Via, dtype: float64

[]: # submitted by Avinash kumar

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