Performing the EDA for Healthcare Providers

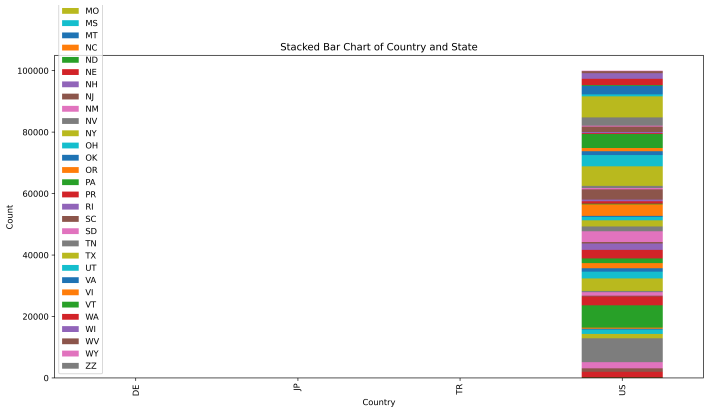
```
# prompt: import pandas as pd

import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
file_path='/content/Healthcare Providers.csv (1).zip'
df=pd.read_csv(file_path)
print(df.head())
#data Cleaning
print("\nMissing values in each column")
print(df.isnull().sum())
df = df.drop_duplicates()
df = df.drop_duplicates()
print("\nSummary statistics of numerical columns after c
print(df.describe())
```

Files

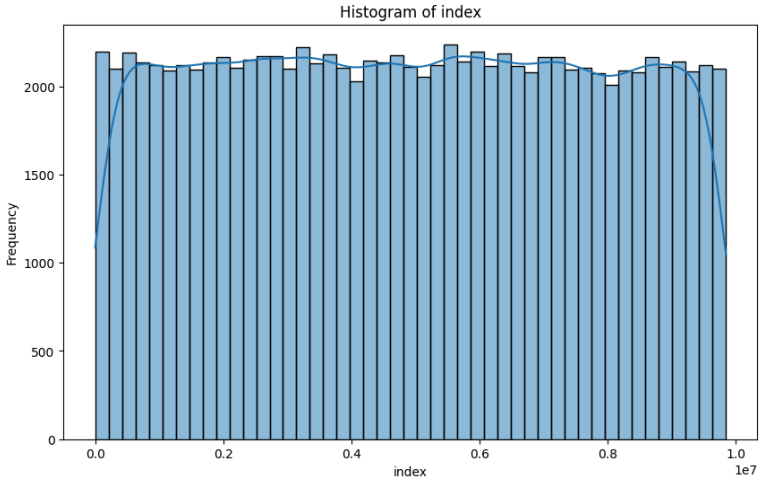
Connecting to a runtime to enable file browsing.

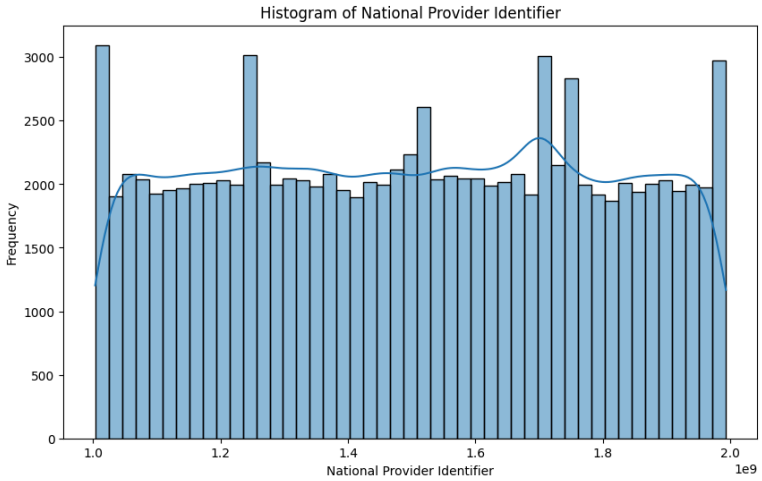
```
Number of Medicare Beneficiaries
Number of Distinct Medicare Beneficiary/Per Day
Average Medicare Allowed Amount
Average Submitted Charge Amount
Average Medicare Payment Amount
Average Medicare Standardized Amount
dtype: int64

Summary statistics of numerical columns after c
              index  National Provider Identifi
count  1.000000e+05                 1.000000e+0
mean   4.907646e+06                 1.498227e+0
std    2.839633e+06                 2.874125e+0
min    2.090000e+02                 1.003001e+0
25%    2.458791e+06                 1.245669e+0
50%    4.901266e+06                 1.497847e+0
75%    7.349450e+06                 1.740374e+0
max    9.847440e+06                 1.993000e+0
```

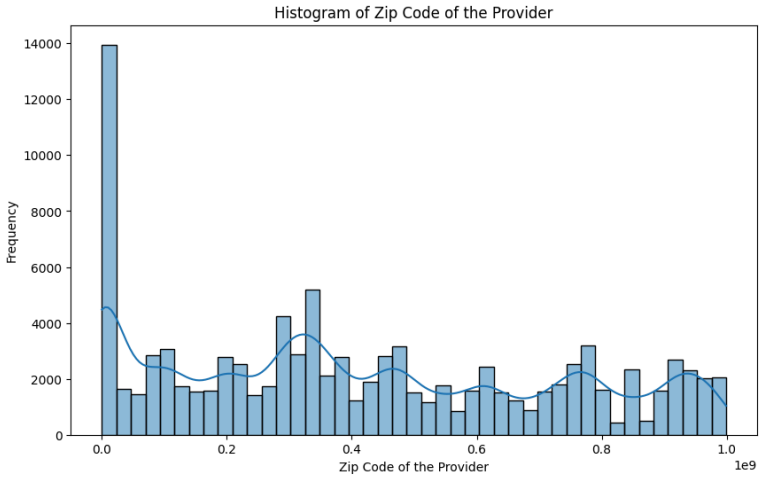
histograms, scatter plots and a heatmap for the numerical columns in a dataframe.

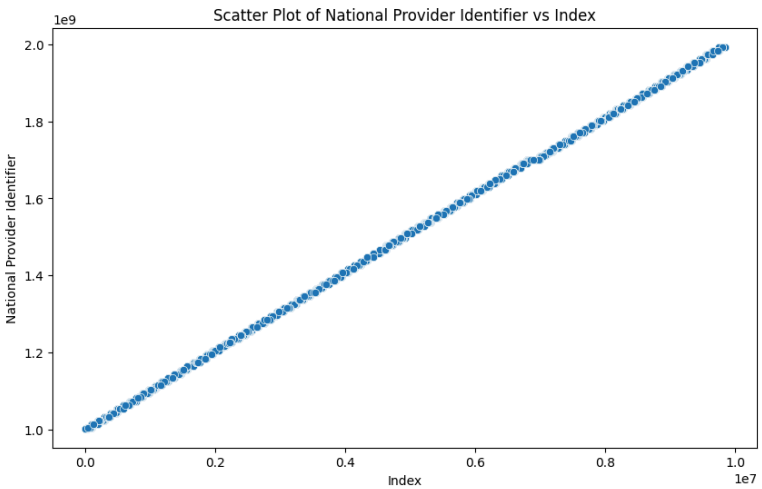


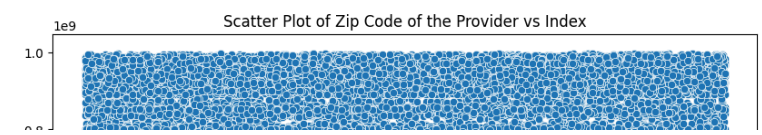
```
# Create histograms for numerical columns
numerical_columns = df.select_dtypes(include=['int64',

for column in numerical_columns:
    plt.figure(figsize=(10, 6))
    sns.histplot(df[column], kde=True)
    plt.title('Histogram of ' + column)
    plt.xlabel(column)
    plt.ylabel('Frequency')
    plt.show()

# Create scatter plots for numerical columns
for column in numerical_columns:
    if column != 'index':  # Skip the index column
        plt.figure(figsize=(10, 6))
        sns.scatterplot(x=df['index'], y=df[column])
        plt.title('Scatter Plot of ' + column + ' vs I
        plt.xlabel('Index')
        plt.ylabel(column)
        plt.show()

# Create a heatmap for the correlation matrix of numer
plt.figure(figsize=(12, 8))
corr_matrix = df[numerical_columns].corr()
sns.heatmap(corr_matrix, annot=True, cmap='coolwarm',
plt.title('Correlation Matrix Heatmap')
plt.show()
```

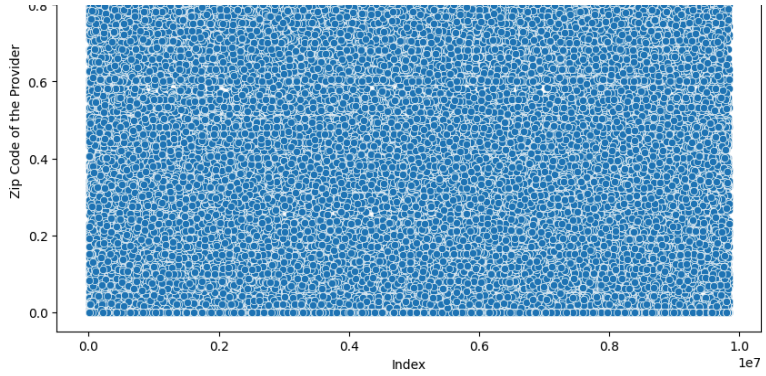

Histogram of index
Frequency
index
1e7

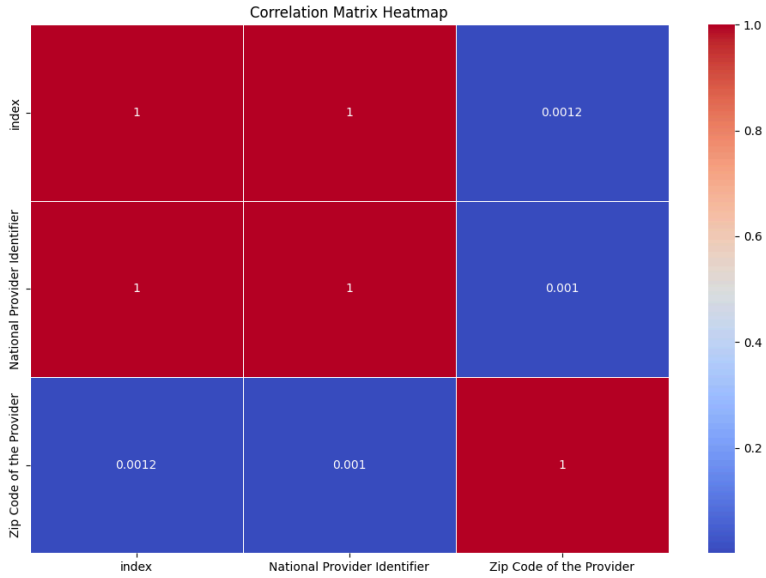

Histogram of National Provider Identifier
Frequency
National Provider Identifier
1e9


Histogram of Zip Code of the Provider
Frequency
Zip Code of the Provider
1e9


Scatter Plot of National Provider Identifier vs Index
1e9
National Provider Identifier
Index
1e7


Scatter Plot of Zip Code of the Provider vs Index
1e9


Zip Code of the Provider
0.0
0.2
0.4
0.6
0.8
0.0
0.2
0.4
0.6
0.8
1.0
1e7
Index

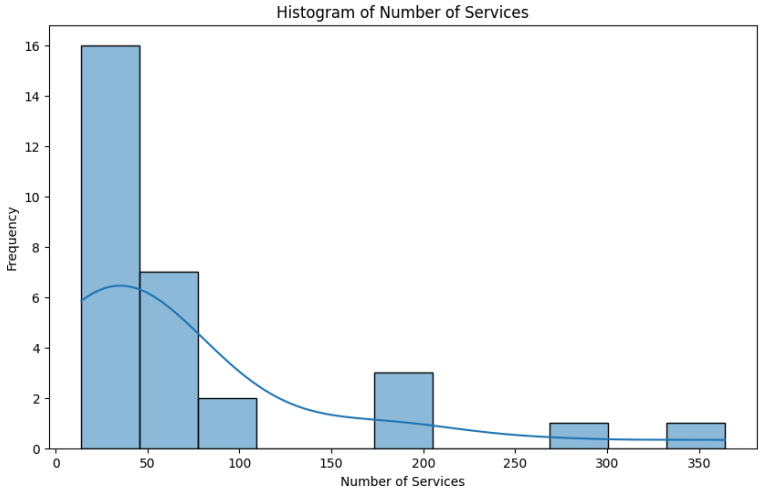

Correlation Matrix Heatmap
index
National Provider Identifier
Zip Code of the Provider
1
1
0.0012
1
1
0.001
0.0012
0.001
1
index
National Provider Identifier
Zip Code of the Provider
1.0
0.8
0.6
0.4
0.2

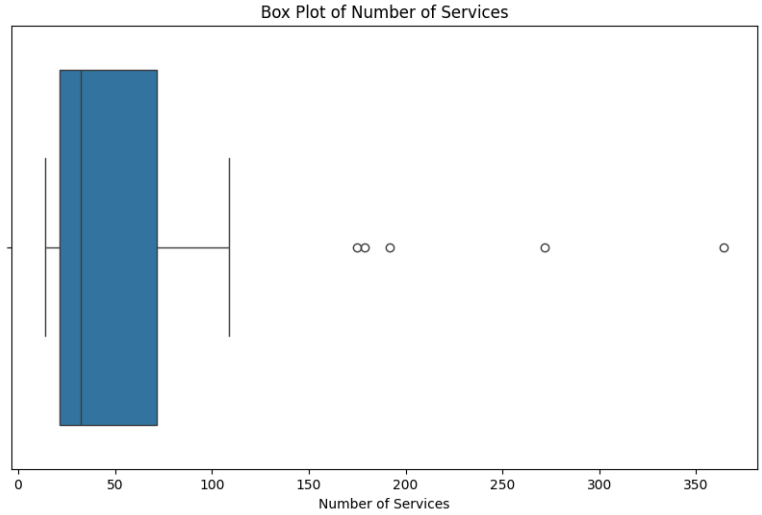
UNIVARIATE ANALYSIS:The Histogram, Box Plot, and Density Plot for the top 30 numerical columns:

Number of Services Number of Medicare Beneficiaries Average Medicare Allowed Amount

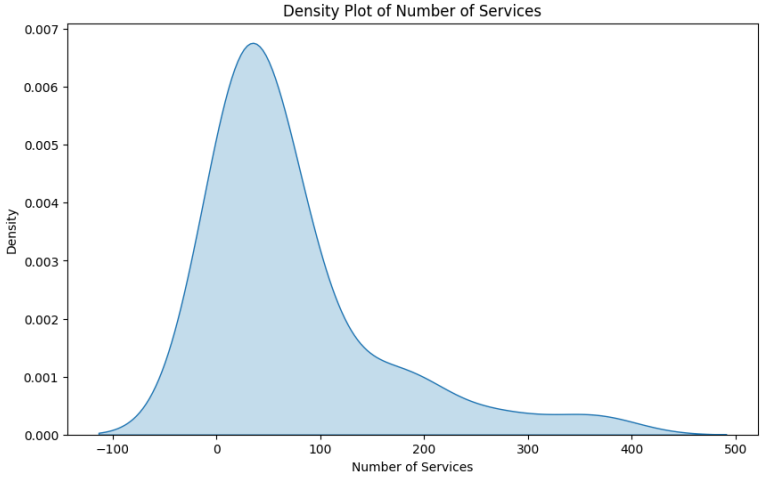
```
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns

# Load the data
file_path = 'Healthcare Providers.csv (1).zip'
df = pd.read_csv(file_path)

# Select the top 30 rows
selected_df = df.head(30)

# Convert relevant columns to numeric, coercing errors
selected_columns = ['Number of Services', 'Number of M
for column in selected_columns:
    selected_df[column] = pd.to_numeric(selected_df[co

# Drop rows with NaN values in the selected columns
cleaned_df = selected_df.dropna(subset=selected_column

# Plot the visualizations for the selected columns
for column in selected_columns:
    plt.figure(figsize=(10, 6))
    sns.histplot(cleaned_df[column], kde=True)
    plt.title('Histogram of ' + column)
    plt.xlabel(column)
    plt.ylabel('Frequency')
    plt.show()

    plt.figure(figsize=(10, 6))
    sns.boxplot(x=cleaned_df[column])
    plt.title('Box Plot of ' + column)
    plt.xlabel(column)
    plt.show()

    plt.figure(figsize=(10, 6))
    sns.kdeplot(cleaned_df[column], shade=True)
    plt.title('Density Plot of ' + column)
    plt.xlabel(column)
    plt.ylabel('Density')
    plt.show()
```

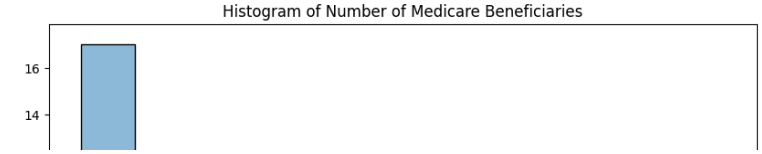
```
<ipython-input-6-6091b6237e1b>:15: SettingWithCopy
A value is trying to be set on a copy of a slice f
Try using .loc[row_indexer,col_indexer] = value in

See the caveats in the documentation: https://pand
  selected_df[column] = pd.to_numeric(selected_df[
```

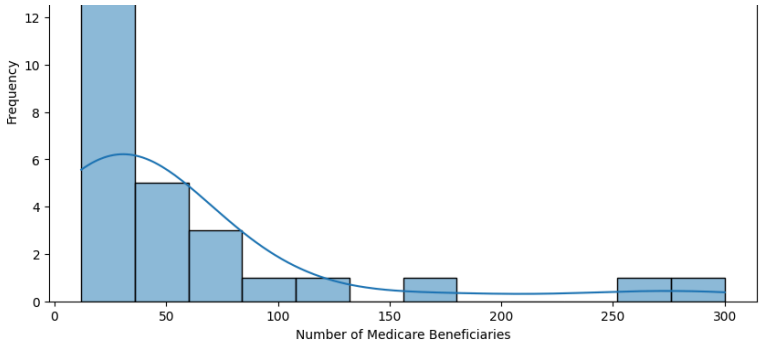


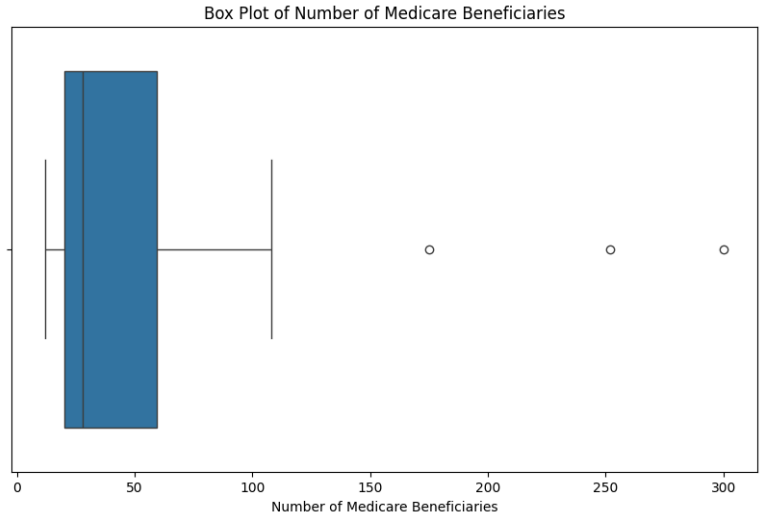



```
<ipython-input-6-6091b6237e1b>:36: FutureWarning:

`shade` is now deprecated in favor of `fill`; sett
This will become an error in seaborn v0.14.0; plea

  sns.kdeplot(cleaned_df[column], shade=True)
```










```
<ipython-input-6-6091b6237e1b>:36: FutureWarning:

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This will become an error in seaborn v0.14.0; plea

  sns.kdeplot(cleaned_df[column], shade=True)
```
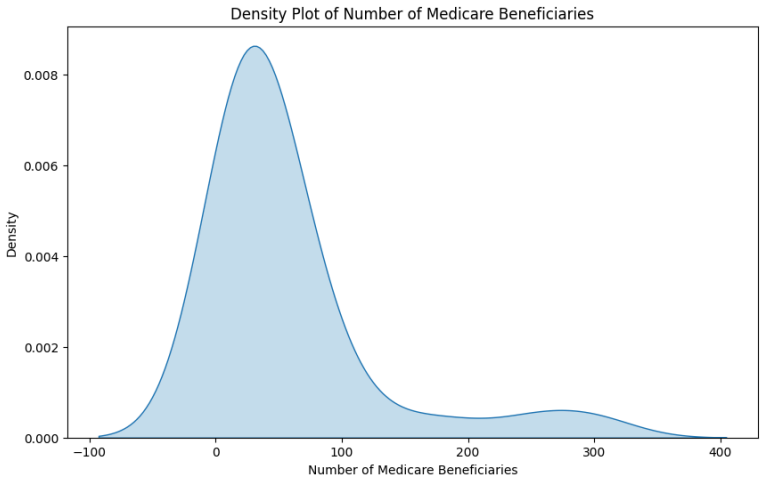
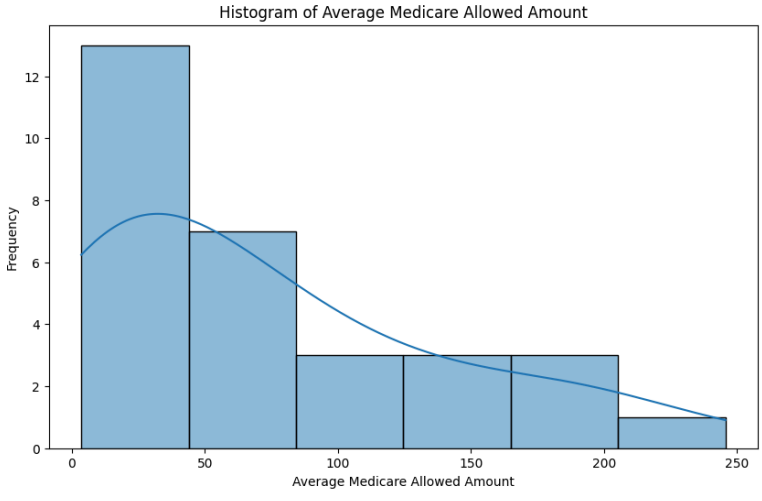
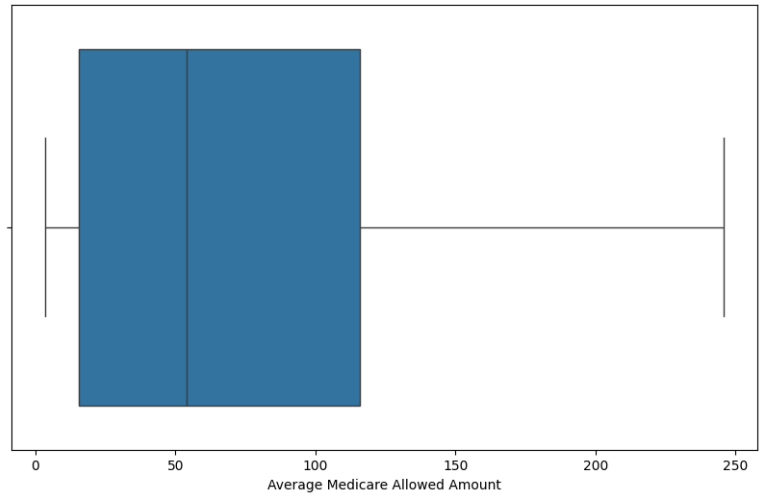
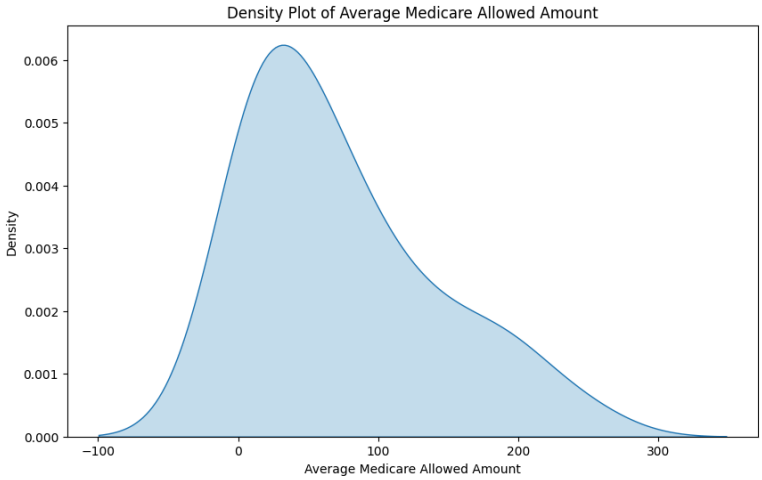





Box Plot of Average Medicare Allowed Amount

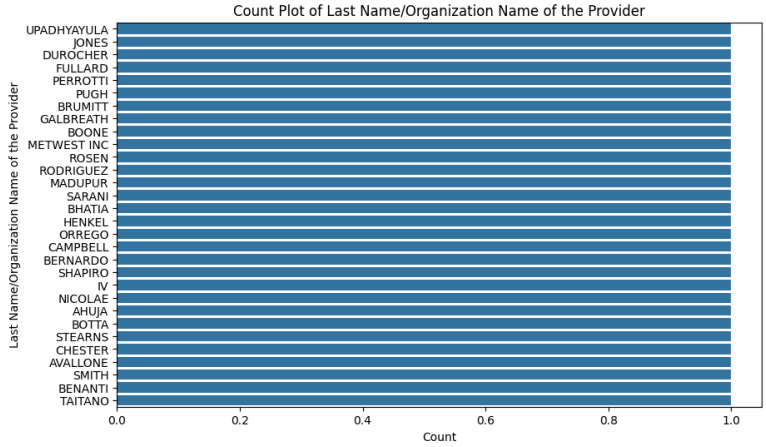


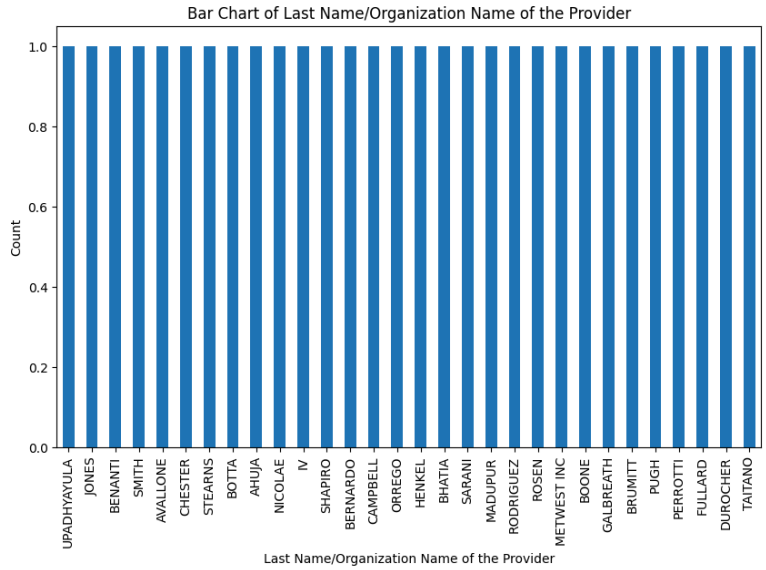

```
<ipython-input-6-6091b6237e1b>:36: FutureWarning:

`shade` is now deprecated in favor of `fill`; sett
This will become an error in seaborn v0.14.0; plea

  sns.kdeplot(cleaned_df[column], shade=True)
```

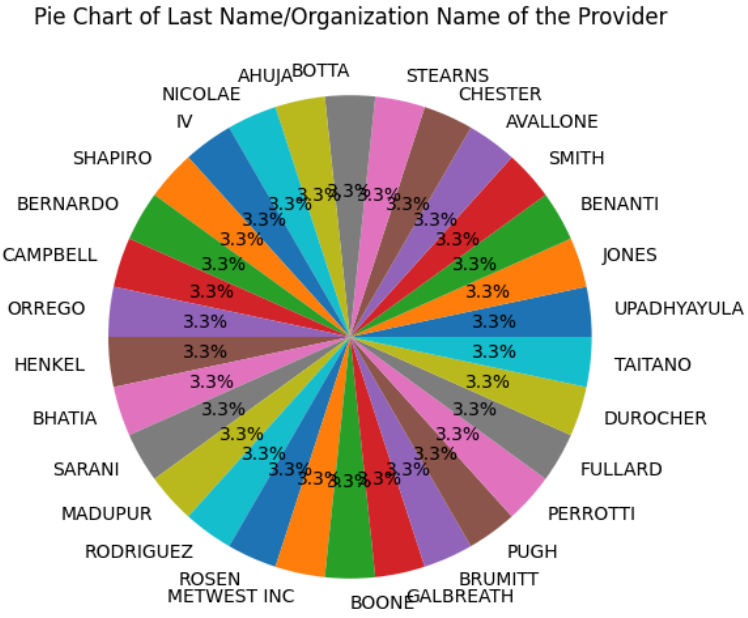


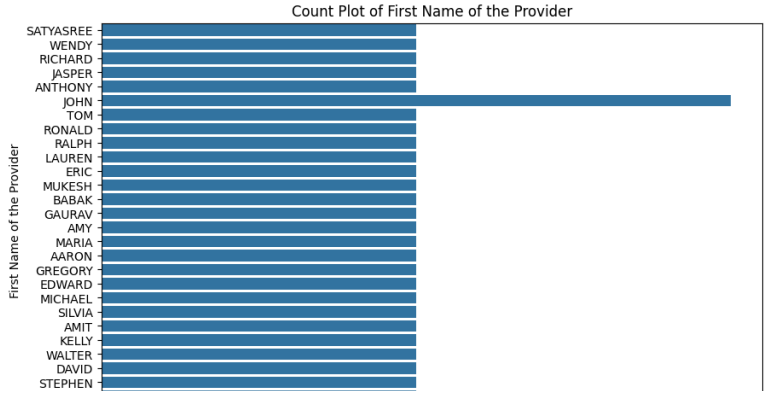
Univariate analysis for categorical columns

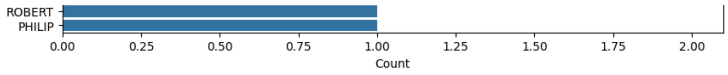
```
import seaborn as sns
import matplotlib.pyplot as plt

# Select the top 30 rows
selected_df = df.head(30)

# Identify categorical columns
categorical_columns = selected_df.select_dtypes(includ

# Plot the visualizations for the selected categorical
for column in categorical_columns:
    plt.figure(figsize=(10, 6))
    sns.countplot(y=selected_df[column])
    plt.title('Count Plot of ' + column)
    plt.xlabel('Count')
    plt.ylabel(column)
    plt.show()

    plt.figure(figsize=(10, 6))
    selected_df[column].value_counts().plot(kind='bar'
    plt.title('Bar Chart of ' + column)
    plt.xlabel(column)
    plt.ylabel('Count')
    plt.show()

    plt.figure(figsize=(10, 6))
    selected_df[column].value_counts().plot(kind='pie'
    plt.title('Pie Chart of ' + column)
    plt.ylabel('')
    plt.show()
```

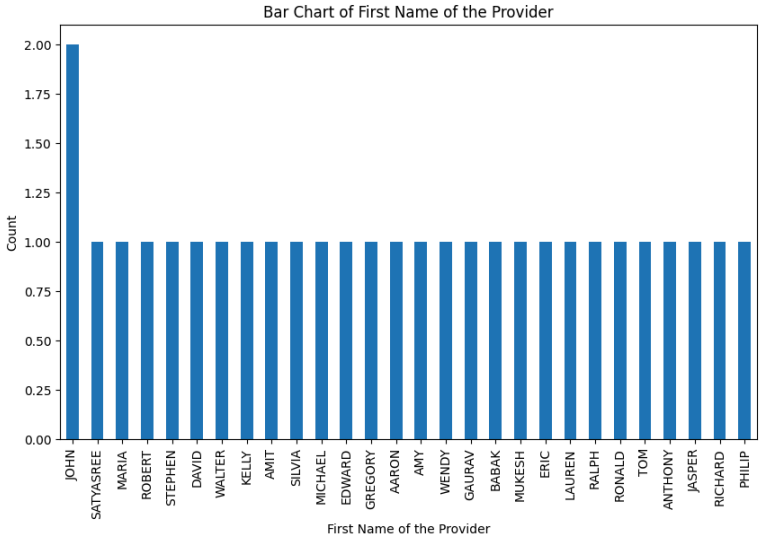

Count Plot of Last Name/Organization Name of the Provider
Last Name/Organization Name of the Provider
UPADHYAYULA
JONES
DUROCHER
FULLARD
PERROTTI
PUGH
BRUMITT
GALBREATH
BOONE
METWEST INC
ROSEN
RODRIGUEZ
MADUPUR
SARANI
BHATIA
HENKEL
ORREGO
CAMPBELL
BERNARDO
SHAPIRO
IV
NICOLAE
AHUJA
BOTTA
STEARNS
CHESTER
AVALLONE
SMITH
BENANTI
TAITANO
0.0
0.2
0.4
0.6
0.8
1.0
Count

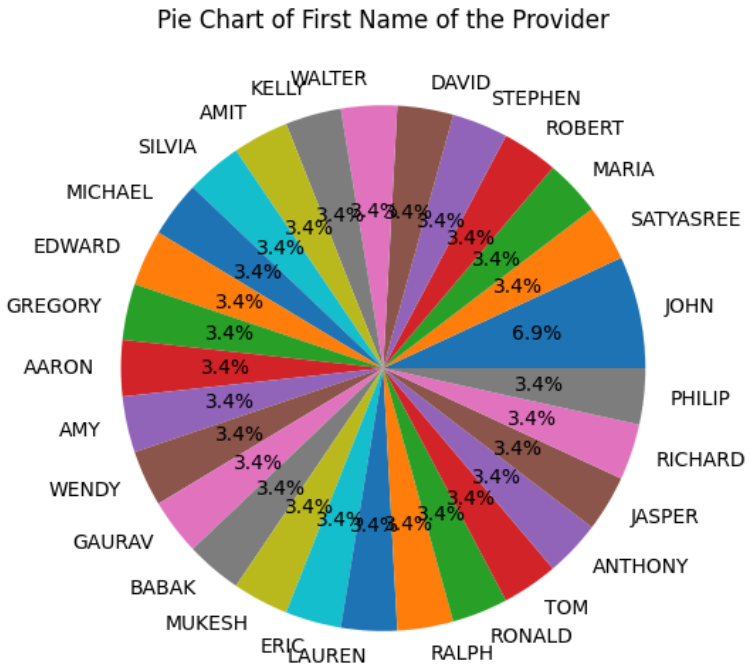

Bar Chart of Last Name/Organization Name of the Provider
Count
0.0
0.2
0.4
0.6
0.8
1.0
UPADHYAYULA
JONES
BENANTI
SMITH
AVALLONE
CHESTER
STEARNS
BOTTA
AHUJA
NICOLAE
IV
SHAPIRO
BERNARDO
CAMPBELL
ORREGO
HENKEL
BHATIA
SARANI
MADUPUR
RODRIGUEZ
ROSEN
METWEST INC
BOONE
GALBREATH
BRUMITT
PUGH
PERROTTI
FULLARD
DUROCHER
TAITANO
Last Name/Organization Name of the Provider

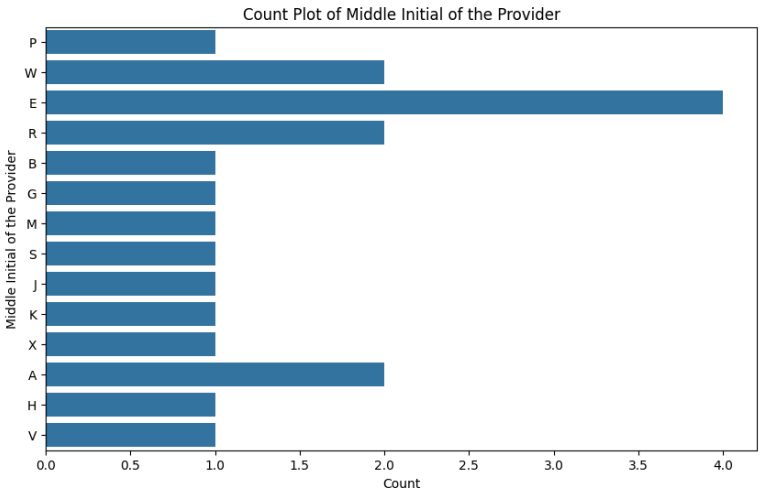

Pie Chart of Last Name/Organization Name of the Provider
AHUJA
BOTTA
STEARNS
CHESTER
AVALLONE
SMITH
BENANTI
JONES
UPADHYAYULA
TAITANO
DUROCHER
FULLARD
PERROTTI
PUGH
BRUMITT
GALBREATH
BOONE
METWEST INC
ROSEN
RODRIGUEZ
MADUPUR
SARANI
BHATIA
HENKEL
ORREGO
CAMPBELL
BERNARDO
SHAPIRO
IV
NICOLAE
3.3%

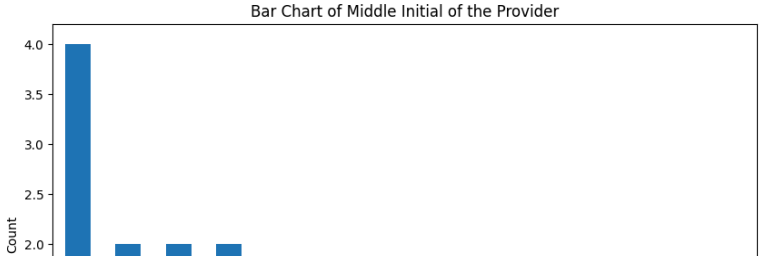

Count Plot of First Name of the Provider
First Name of the Provider
SATYASREE
WENDY
RICHARD
JASPER
ANTHONY
JOHN
TOM
RONALD
RALPH
LAUREN
ERIC
MUKESH
BABAK
GAURAV
AMY
MARIA
AARON
GREGORY
EDWARD
MICHAEL
SILVIA
AMIT
KELLY
WALTER
DAVID
STEPHEN

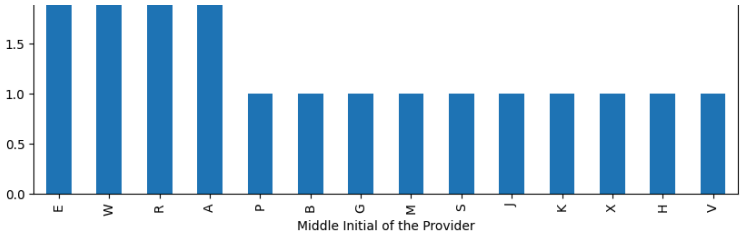

ROBERT
PHILIP
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00
Count


Bar Chart of First Name of the Provider
Count
First Name of the Provider
JOHN
SATYASREE
MARIA
ROBERT
STEPHEN
DAVID
WALTER
KELLY
AMIT
SILVIA
MICHAEL
EDWARD
GREGORY
AARON
AMY
WENDY
GAURAV
BABAK
MUKESH
ERIC
LAUREN
RALPH
RONALD
TOM
ANTHONY
JASPER
RICHARD
PHILIP

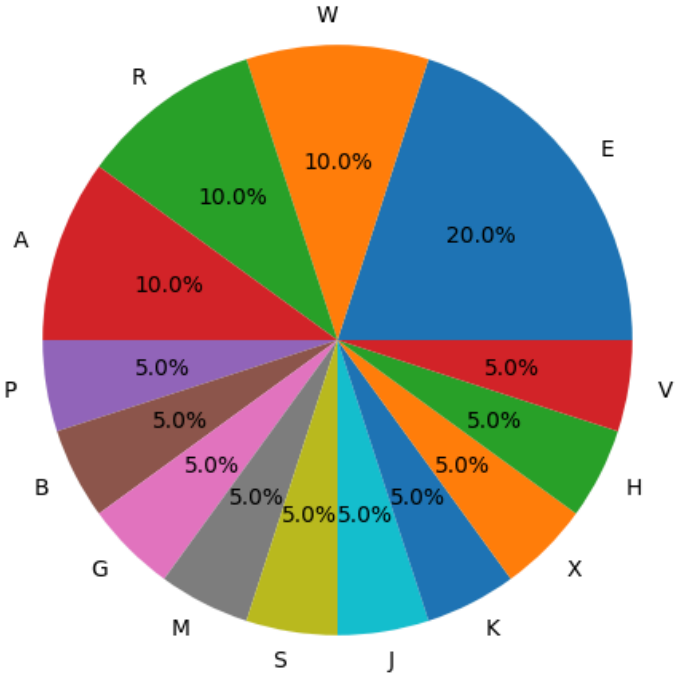

Pie Chart of First Name of the Provider
JOHN
6.9%
SATYASREE
MARIA
ROBERT
STEPHEN
DAVID
WALTER
KELLY
AMIT
SILVIA
MICHAEL
EDWARD
GREGORY
AARON
AMY
WENDY
GAURAV
BABAK
MUKESH
ERIC
LAUREN
RALPH
RONALD
TOM
ANTHONY
JASPER
RICHARD
PHILIP
3.4%

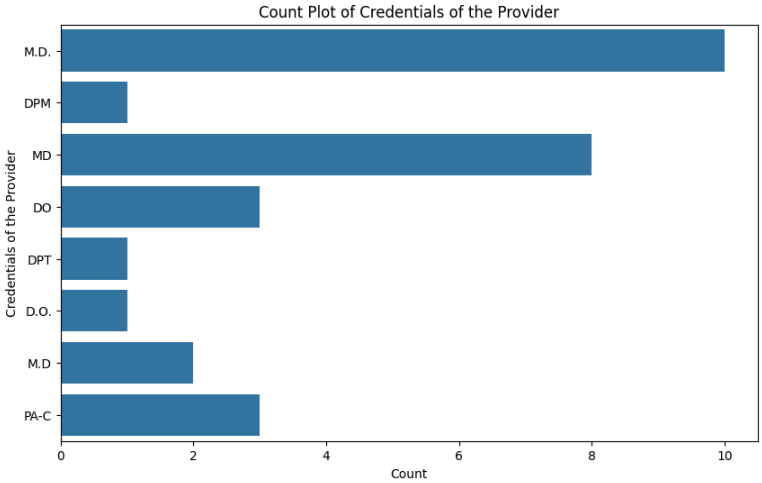

Count Plot of Middle Initial of the Provider
Middle Initial of the Provider
P
W
E
R
B
G
M
S
J
K
X
A
H
V
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
Count

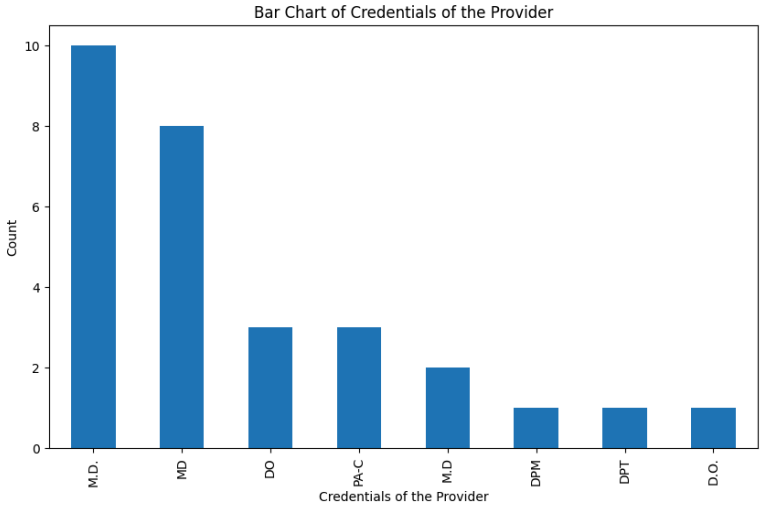

Bar Chart of Middle Initial of the Provider
Count
4.0
3.5
3.0
2.5
2.0



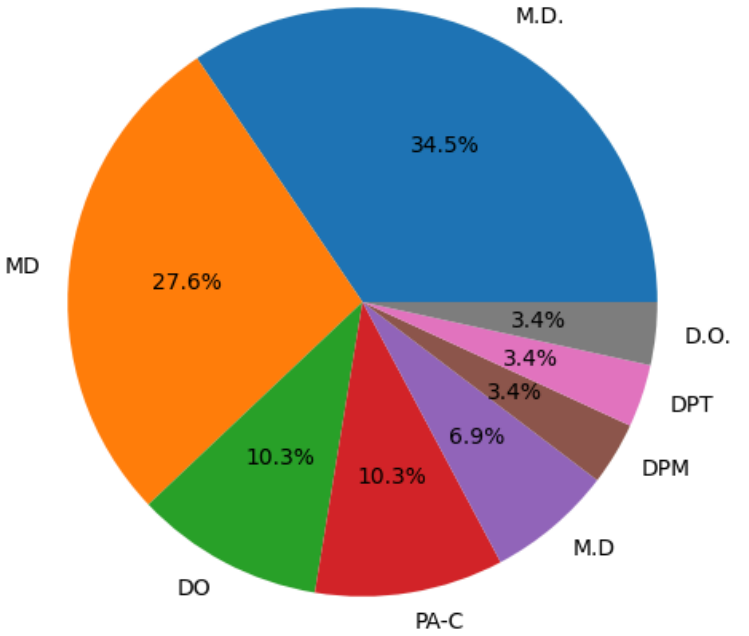
Pie Chart of Middle Initial of the Provider

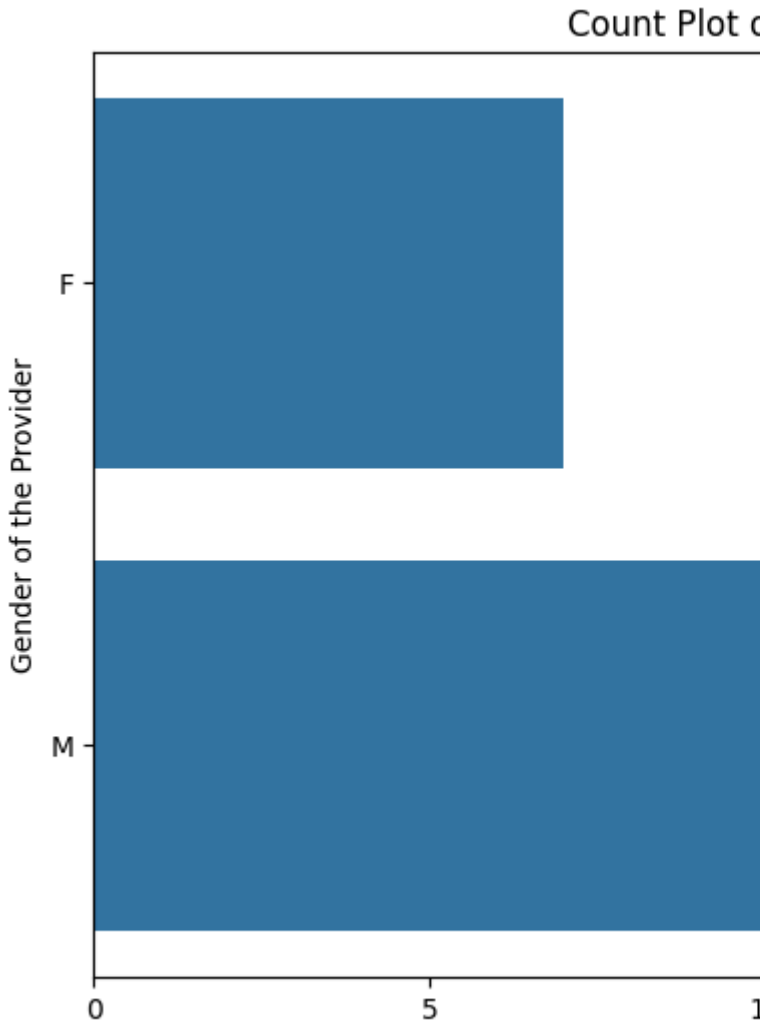


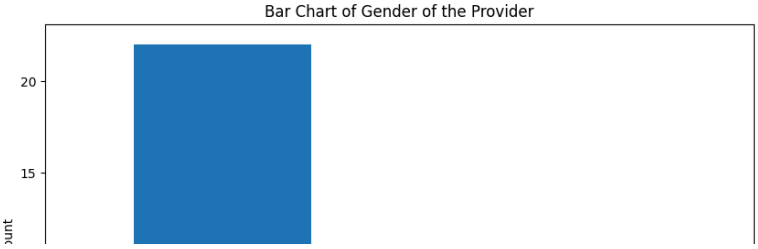


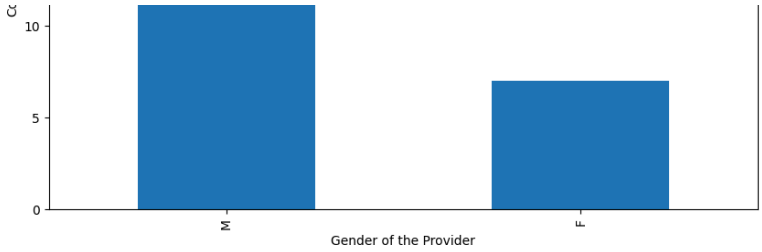


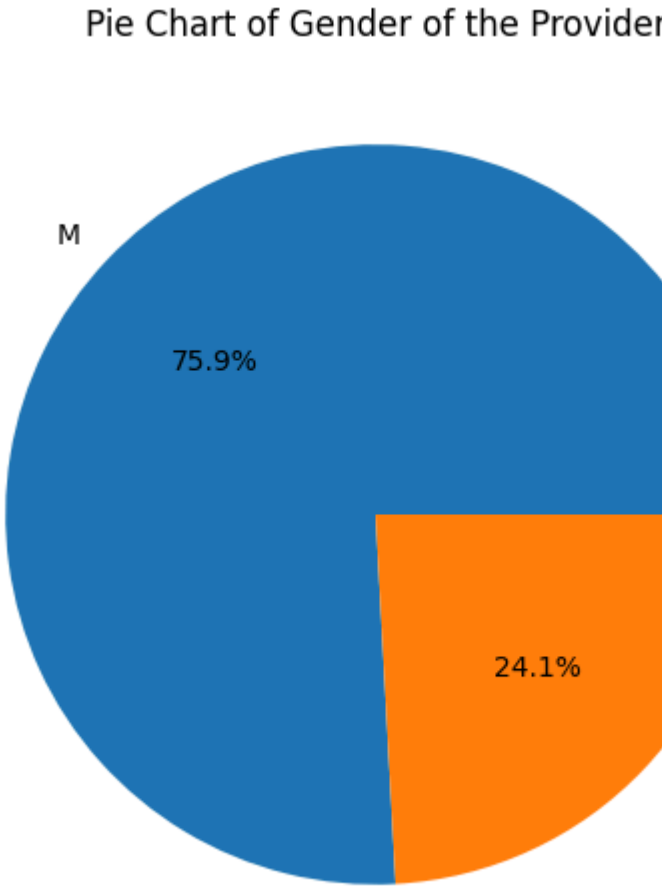
Pie Chart of Credentials of the Provider

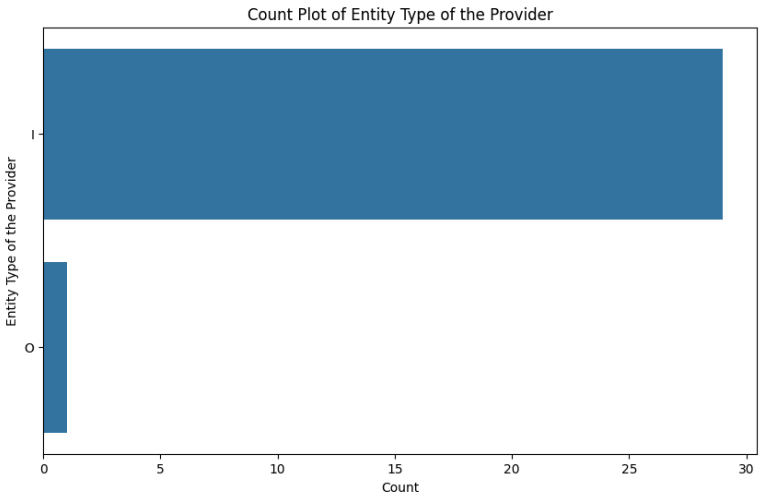

M.D.
34.5%
MD
27.6%
3.4%
D.O.
3.4%
DPT
3.4%
DPM
6.9%
M.D
10.3%
10.3%
DO
PA-C

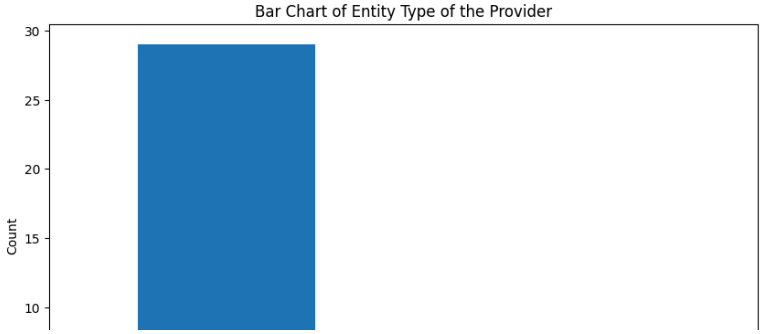

Count Plot
Gender of the Provider
F
M
0
5

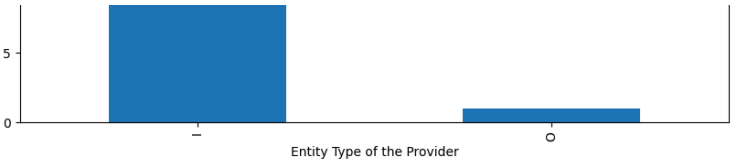

Bar Chart of Gender of the Provider
20
15

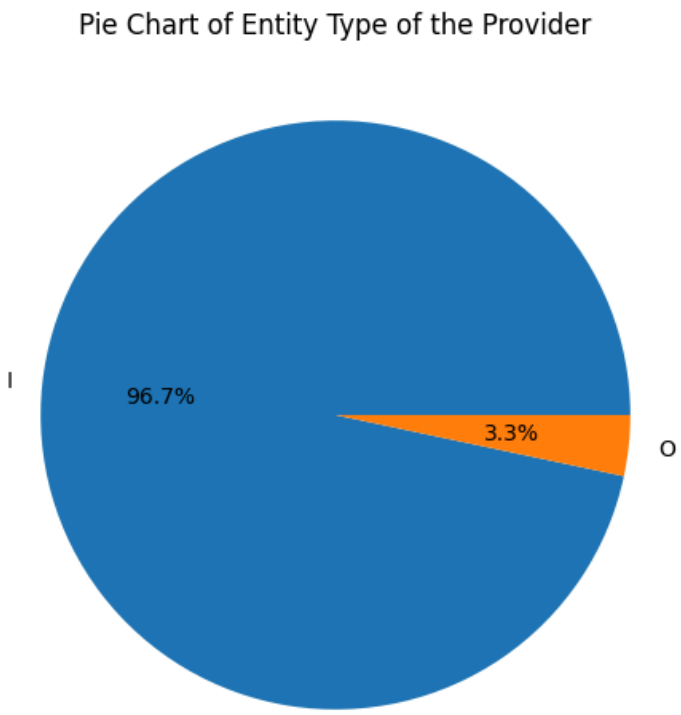

Cc
10
5
0
M
F
Gender of the Provider

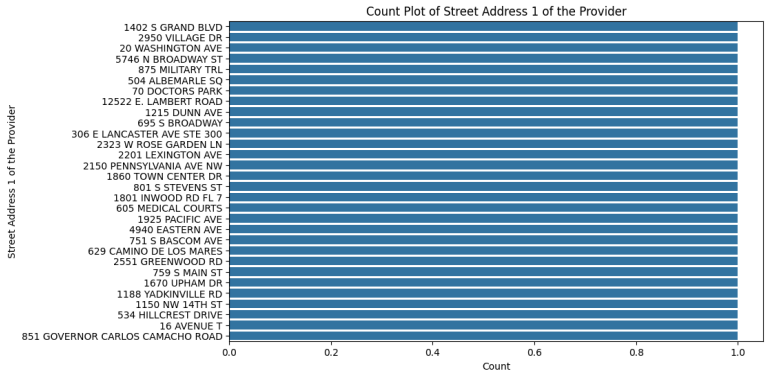

Pie Chart of Gender of the Provider
M
75.9%
24.1%

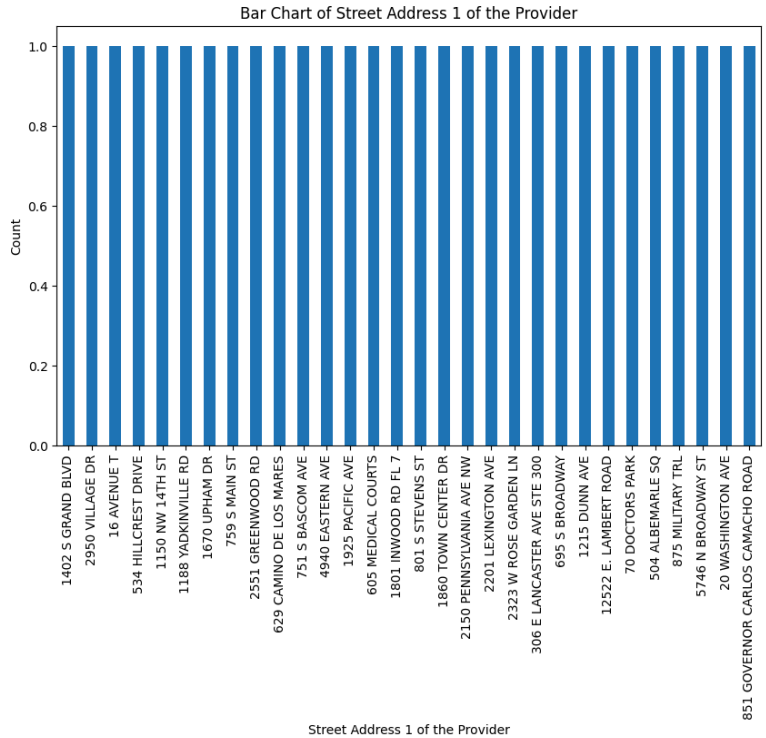

Count Plot of Entity Type of the Provider
Entity Type of the Provider
I
O
0
5
10
15
20
25
30
Count

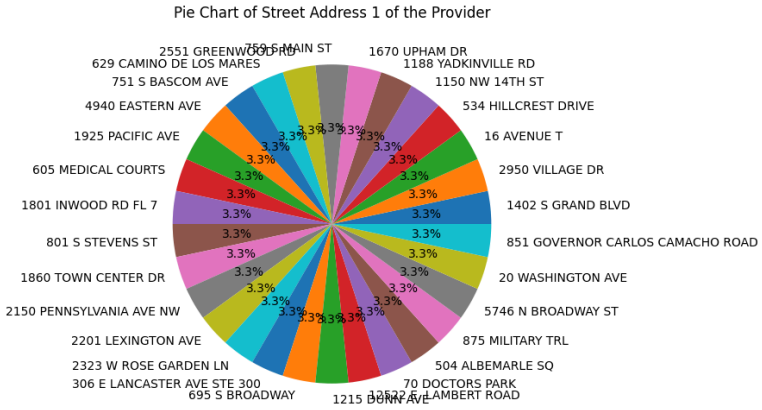

Bar Chart of Entity Type of the Provider
Count
30
25
20
15
10

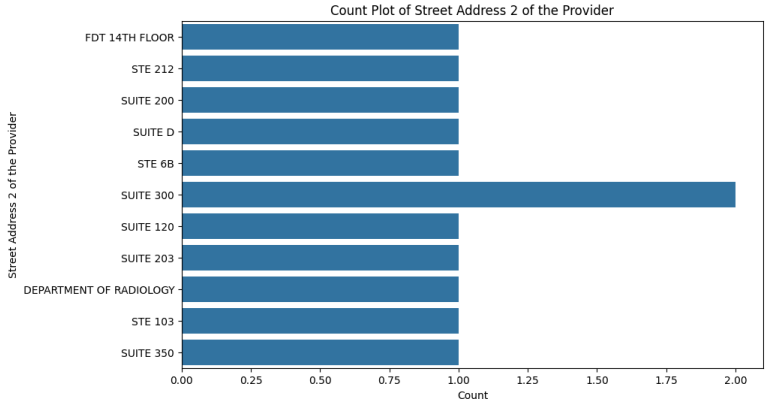

5
0
I
O
Entity Type of the Provider

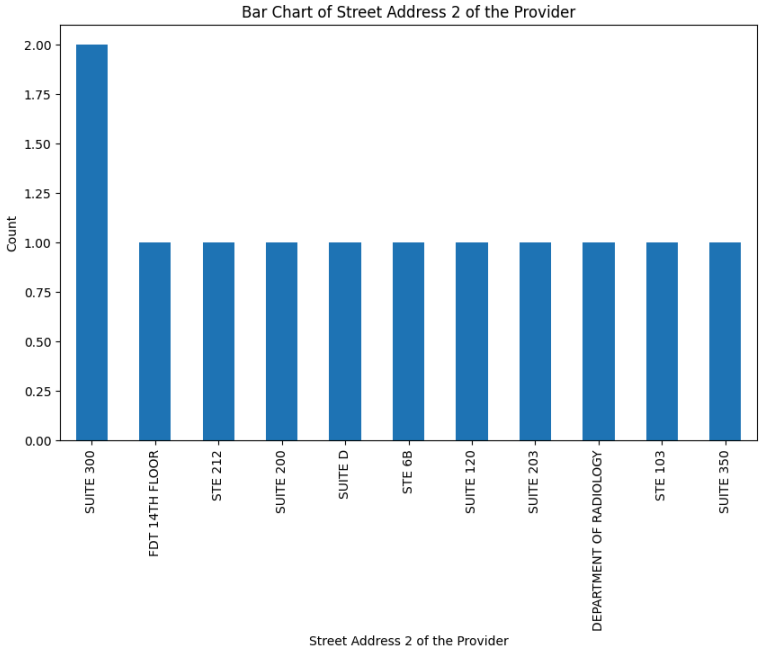

Pie Chart of Entity Type of the Provider
I
96.7%
3.3%
O

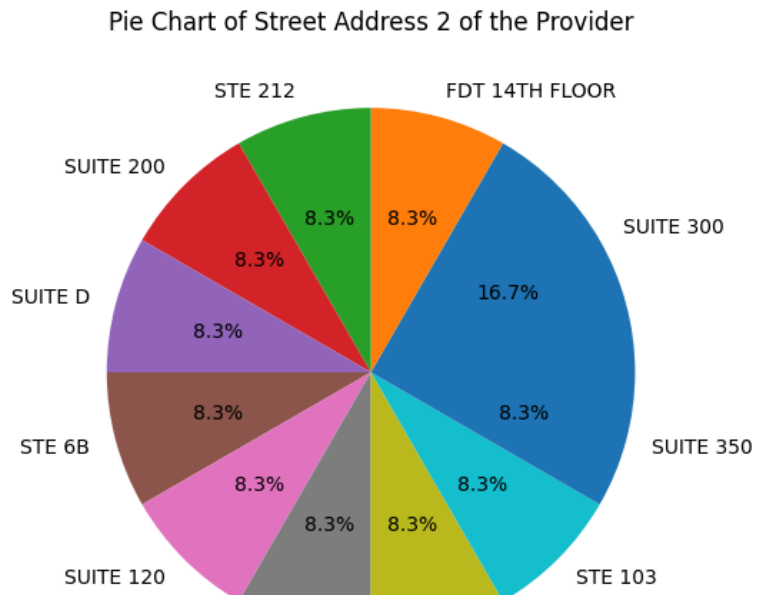

Count Plot of Street Address 1 of the Provider
Street Address 1 of the Provider
1402 S GRAND BLVD
2950 VILLAGE DR
20 WASHINGTON AVE
5746 N BROADWAY ST
875 MILITARY TRL
504 ALBEMARLE SQ
70 DOCTORS PARK
12522 E. LAMBERT ROAD
1215 DUNN AVE
695 S BROADWAY
306 E LANCASTER AVE STE 300
2323 W ROSE GARDEN LN
2201 LEXINGTON AVE
2150 PENNSYLVANIA AVE NW
1860 TOWN CENTER DR
801 S STEVENS ST
1801 INWOOD RD FL 7
605 MEDICAL COURTS
1925 PACIFIC AVE
4940 EASTERN AVE
751 S BASCOM AVE
629 CAMINO DE LOS MARES
2551 GREENWOOD RD
759 S MAIN ST
1670 UPHAM DR
1188 YADKINVILLE RD
1150 NW 14TH ST
534 HILLCREST DRIVE
16 AVENUE T
851 GOVERNOR CARLOS CAMACHO ROAD
0.0
0.2
0.4
0.6
0.8
1.0
Count


Bar Chart of Street Address 1 of the Provider
Count
0.0
0.2
0.4
0.6
0.8
1.0
1402 S GRAND BLVD
2950 VILLAGE DR
16 AVENUE T
534 HILLCREST DRIVE
1150 NW 14TH ST
1188 YADKINVILLE RD
1670 UPHAM DR
759 S MAIN ST
2551 GREENWOOD RD
629 CAMINO DE LOS MARES
751 S BASCOM AVE
4940 EASTERN AVE
1925 PACIFIC AVE
605 MEDICAL COURTS
1801 INWOOD RD FL 7
801 S STEVENS ST
1860 TOWN CENTER DR
2150 PENNSYLVANIA AVE NW
2201 LEXINGTON AVE
2323 W ROSE GARDEN LN
306 E LANCASTER AVE STE 300
695 S BROADWAY
1215 DUNN AVE
12522 E. LAMBERT ROAD
70 DOCTORS PARK
504 ALBEMARLE SQ
875 MILITARY TRL
5746 N BROADWAY ST
20 WASHINGTON AVE
851 GOVERNOR CARLOS CAMACHO ROAD
Street Address 1 of the Provider

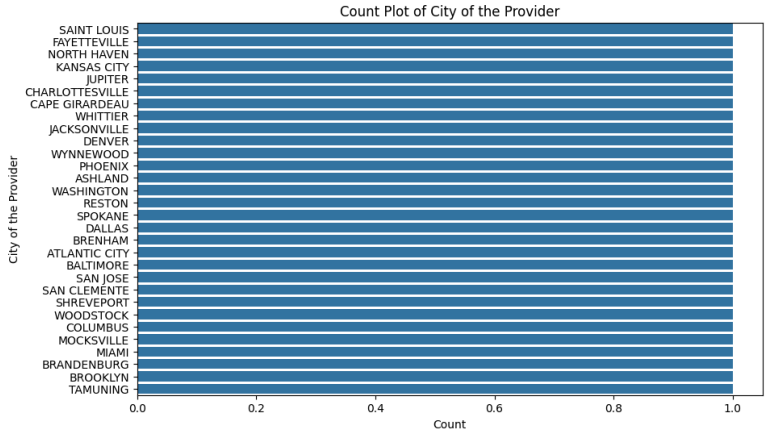

Pie Chart of Street Address 1 of the Provider
2551 GREENWOOD RD
759 E MAIN ST
1670 UPHAM DR
629 CAMINO DE LOS MARES
1188 YADKINVILLE RD
751 S BASCOM AVE
1150 NW 14TH ST
4940 EASTERN AVE
534 HILLCREST DRIVE
1925 PACIFIC AVE
16 AVENUE T
605 MEDICAL COURTS
2950 VILLAGE DR
1801 INWOOD RD FL 7
1402 S GRAND BLVD
801 S STEVENS ST
851 GOVERNOR CARLOS CAMACHO ROAD
1860 TOWN CENTER DR
20 WASHINGTON AVE
2150 PENNSYLVANIA AVE NW
5746 N BROADWAY ST
2201 LEXINGTON AVE
875 MILITARY TRL
2323 W ROSE GARDEN LN
504 ALBEMARLE SQ
306 E LANCASTER AVE STE 300
70 DOCTORS PARK
695 S BROADWAY
1215 DUNN AVE
12522 E LAMBERT ROAD
3.3%

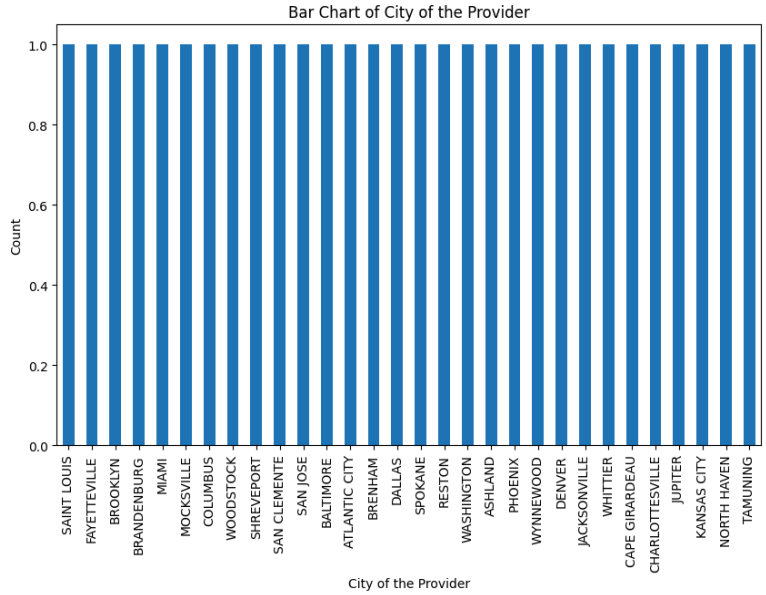

Count Plot of Street Address 2 of the Provider
Street Address 2 of the Provider
FDT 14TH FLOOR
STE 212
SUITE 200
SUITE D
STE 6B
SUITE 300
SUITE 120
SUITE 203
DEPARTMENT OF RADIOLOGY
STE 103
SUITE 350
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00
Count

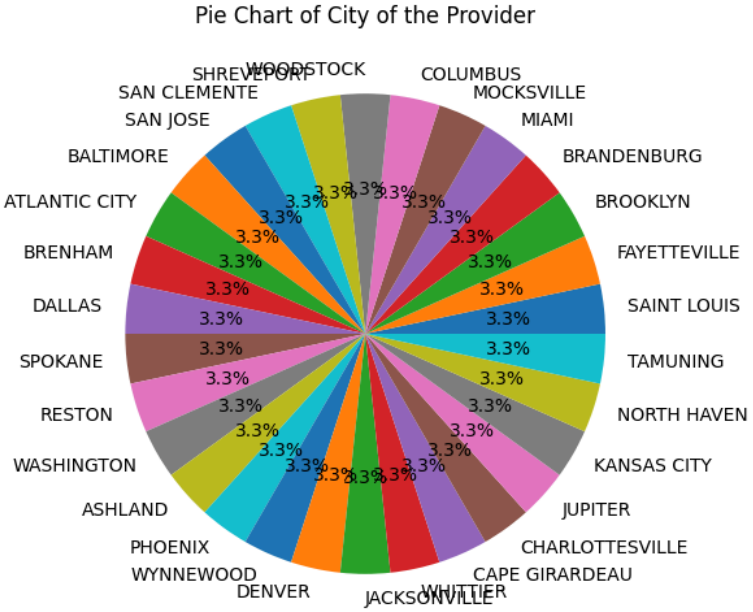

Bar Chart of Street Address 2 of the Provider
Count
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00
SUITE 300
FDT 14TH FLOOR
STE 212
SUITE 200
SUITE D
STE 6B
SUITE 120
SUITE 203
DEPARTMENT OF RADIOLOGY
STE 103
SUITE 350
Street Address 2 of the Provider

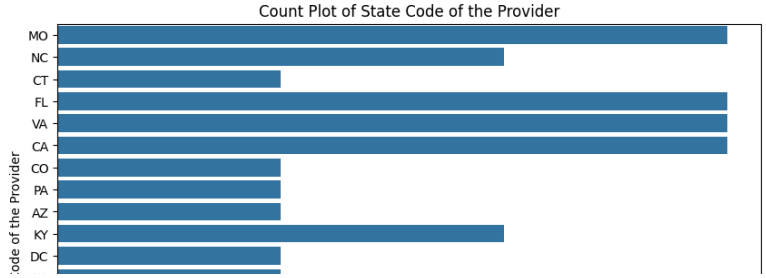

Pie Chart of Street Address 2 of the Provider
STE 212
FDT 14TH FLOOR
SUITE 200
SUITE 300
SUITE D
STE 6B
SUITE 350
SUITE 120
STE 103
8.3%
16.7%

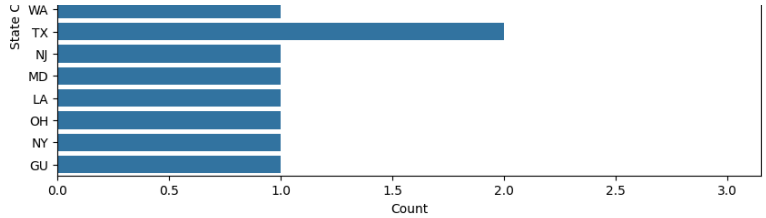

SUITE 203
DEPARTMENT OF RADIOLOGY

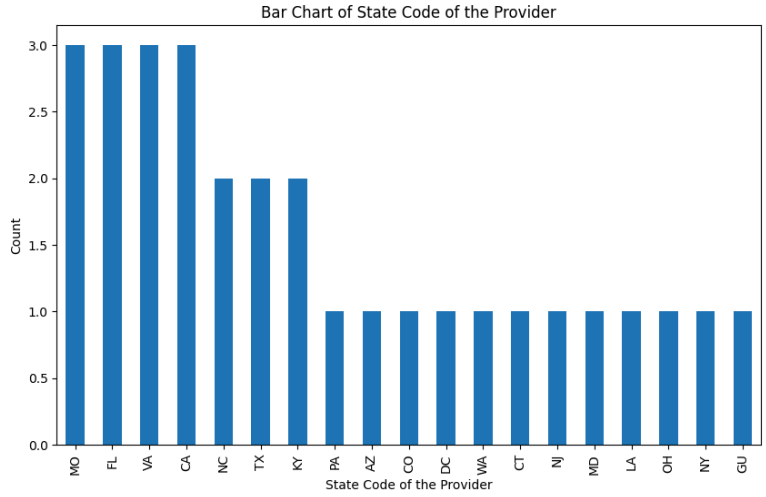

Count Plot of City of the Provider
SAINT LOUIS
FAYETTEVILLE
NORTH HAVEN
KANSAS CITY
JUPITER
CHARLOTTESVILLE
CAPE GIRARDEAU
WHITTIER
JACKSONVILLE
DENVER
WYNNEWOOD
PHOENIX
ASHLAND
WASHINGTON
RESTON
SPOKANE
DALLAS
BRENHAM
ATLANTIC CITY
BALTIMORE
SAN JOSE
SAN CLEMENTE
SHREVEPORT
WOODSTOCK
COLUMBUS
MOCKSVILLE
MIAMI
BRANDENBURG
BROOKLYN
TAMUNING
City of the Provider
0.0
0.2
0.4
0.6
0.8
1.0
Count

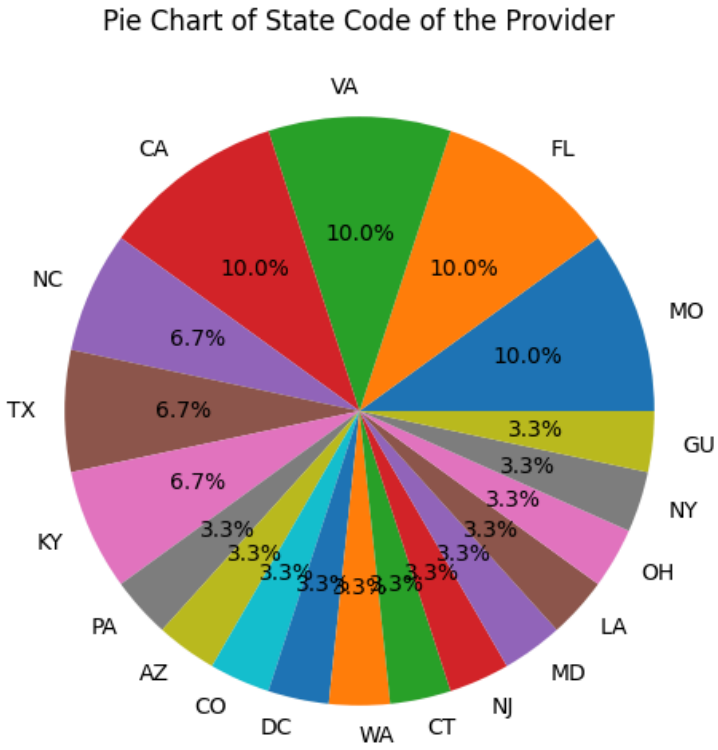

Bar Chart of City of the Provider
Count
0.0
0.2
0.4
0.6
0.8
1.0
SAINT LOUIS
FAYETTEVILLE
BROOKLYN
BRANDENBURG
MIAMI
MOCKSVILLE
COLUMBUS
WOODSTOCK
SHREVEPORT
SAN CLEMENTE
SAN JOSE
BALTIMORE
ATLANTIC CITY
BRENHAM
DALLAS
SPOKANE
RESTON
WASHINGTON
ASHLAND
PHOENIX
WYNNEWOOD
DENVER
JACKSONVILLE
WHITTIER
CAPE GIRARDEAU
CHARLOTTESVILLE
JUPITER
KANSAS CITY
NORTH HAVEN
TAMUNING
City of the Provider

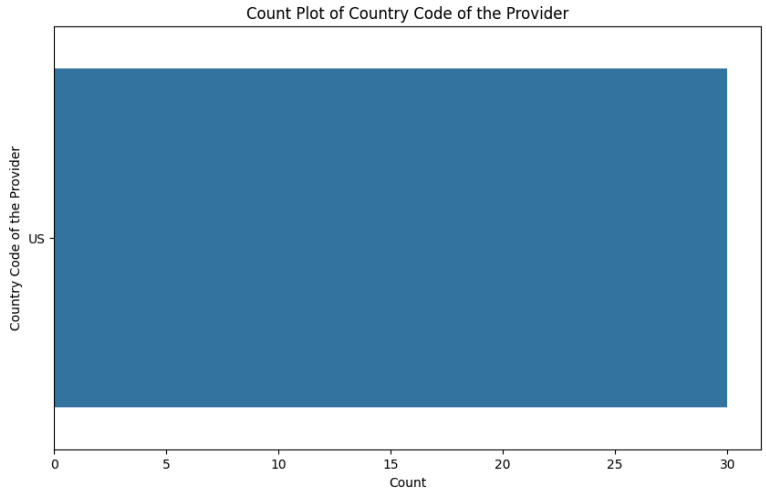

Pie Chart of City of the Provider
WOODSTOCK
COLUMBUS
MOCKSVILLE
MIAMI
BRANDENBURG
BROOKLYN
FAYETTEVILLE
SAINT LOUIS
TAMUNING
NORTH HAVEN
KANSAS CITY
JUPITER
CHARLOTTESVILLE
CAPE GIRARDEAU
WHITTIER
JACKSONVILLE
DENVER
WYNNEWOOD
PHOENIX
ASHLAND
WASHINGTON
RESTON
SPOKANE
DALLAS
BRENHAM
ATLANTIC CITY
BALTIMORE
SAN JOSE
SAN CLEMENTE
SHREVEPORT
3.3%

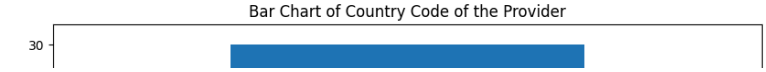

Count Plot of State Code of the Provider
MO
NC
CT
FL
VA
CA
CO
PA
AZ
KY
DC

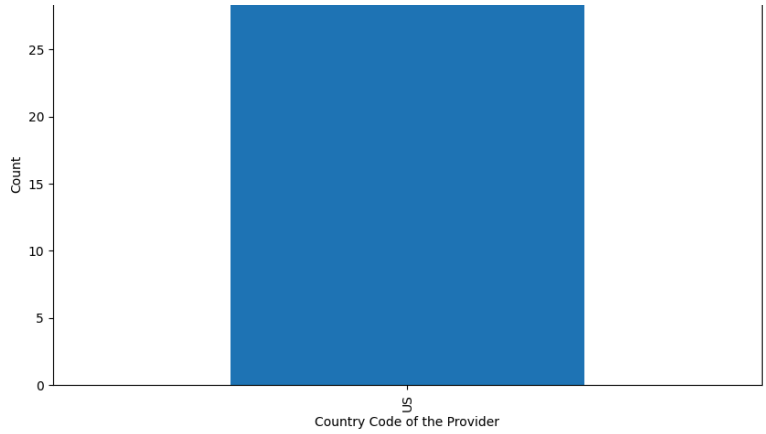

State C
WA
TX
NJ
MD
LA
OH
NY
GU
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Count

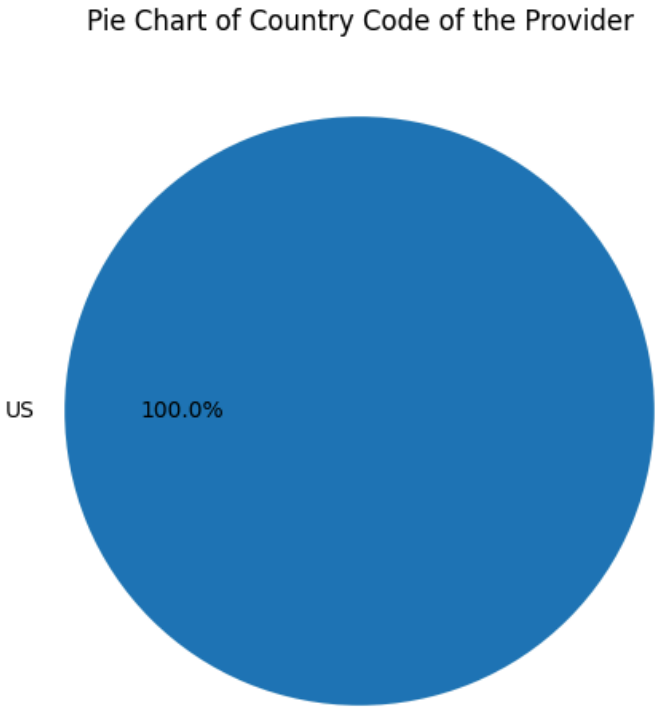

Bar Chart of State Code of the Provider
Count
State Code of the Provider
MO
FL
VA
CA
NC
TX
KY
PA
AZ
CO
DC
WA
CT
NJ
MD
LA
OH
NY
GU

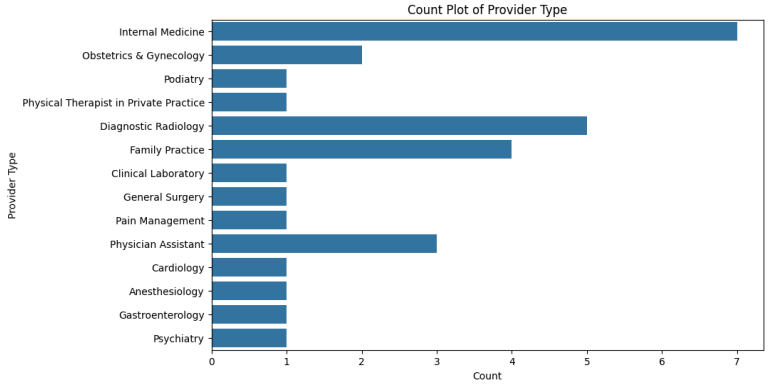

Pie Chart of State Code of the Provider
VA
FL
MO
GU
NY
OH
LA
MD
NJ
CT
WA
DC
CO
AZ
PA
KY
TX
NC
CA
10.0%
6.7%
3.3%

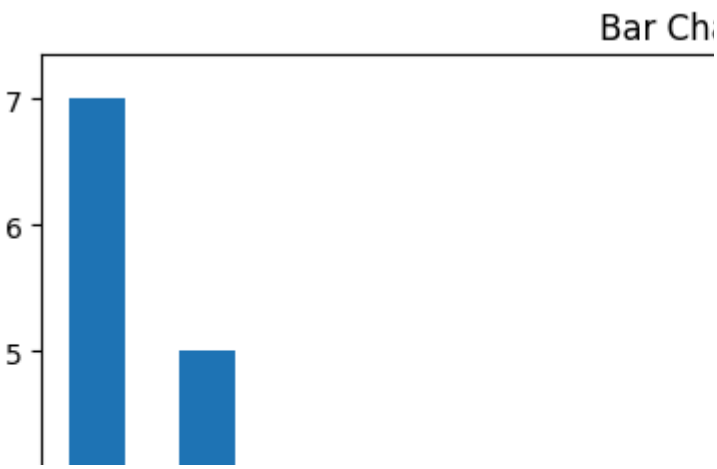

Count Plot of Country Code of the Provider
Country Code of the Provider
US
0
5
10
15
20
25
30
Count

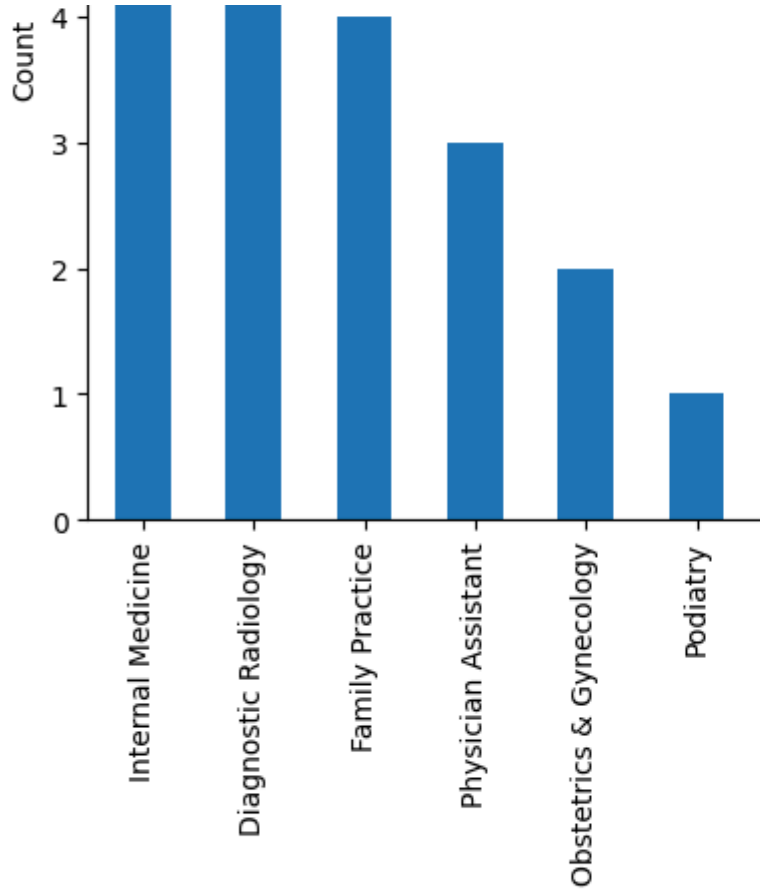

Bar Chart of Country Code of the Provider
30

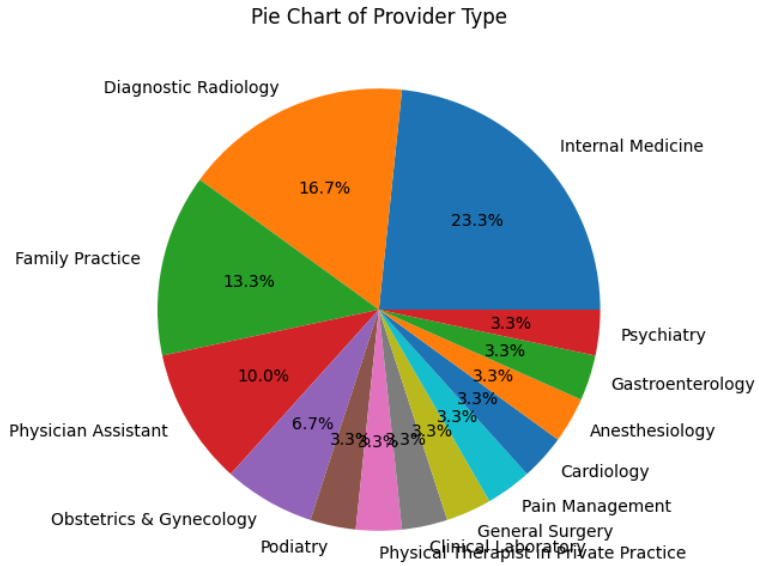

Count
25
20
15
10
5
0
US
Country Code of the Provider

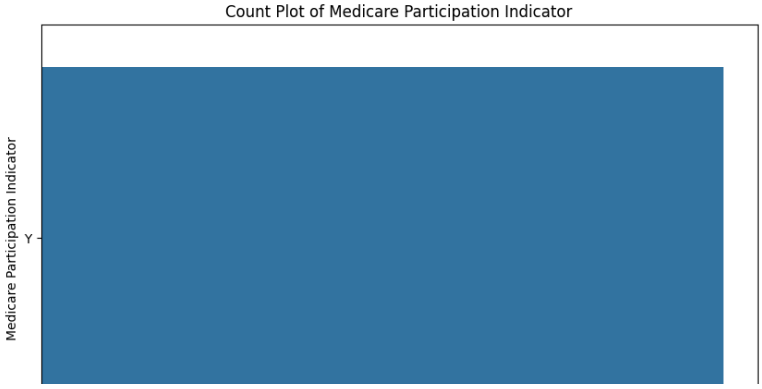

Pie Chart of Country Code of the Provider
US
100.0%

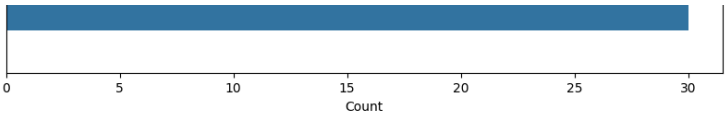

Count Plot of Provider Type
Internal Medicine
Obstetrics & Gynecology
Podiatry
Physical Therapist in Private Practice
Diagnostic Radiology
Family Practice
Clinical Laboratory
General Surgery
Pain Management
Physician Assistant
Cardiology
Anesthesiology
Gastroenterology
Psychiatry
Provider Type
0
1
2
3
4
5
6
7
Count

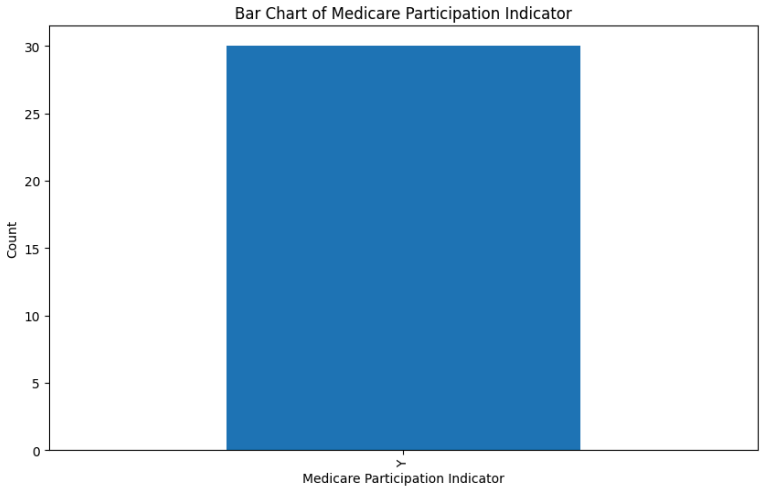

Bar Ch
7
6
5

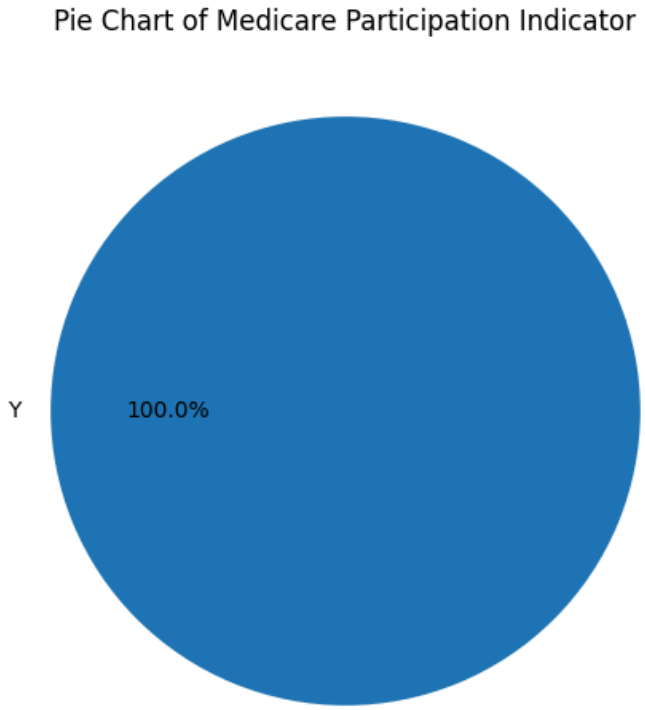

Count
4
3
2
1
0
Internal Medicine
Diagnostic Radiology
Family Practice
Physician Assistant
Obstetrics & Gynecology
Podiatry

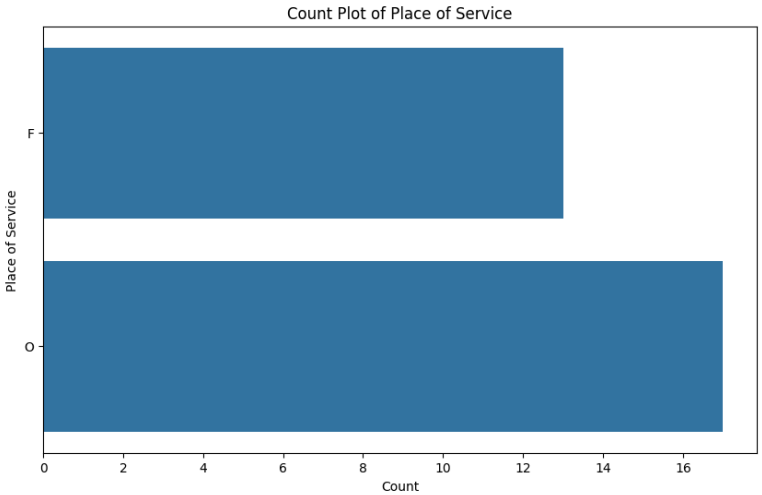

Pie Chart of Provider Type
Diagnostic Radiology
Internal Medicine
16.7%
23.3%
Family Practice
13.3%
3.3%
Psychiatry
3.3%
Gastroenterology
10.0%
3.3%
3.3%
Physician Assistant
6.7%
3.3%
Anesthesiology
3.3%
3.3%
3.3%
Cardiology
Pain Management
Obstetrics & Gynecology
General Surgery
Podiatry
Clinical Laboratory
Physical Therapist in Private Practice

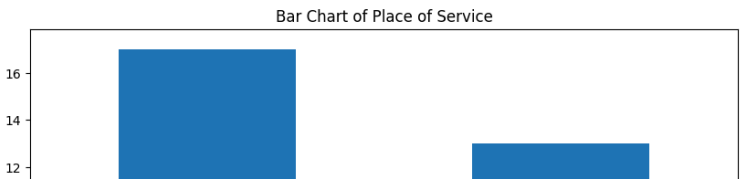

Count Plot of Medicare Participation Indicator
Medicare Participation Indicator
Y

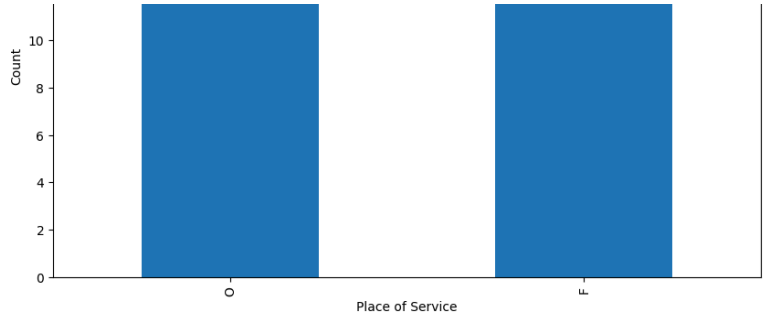

0
5
10
15
20
25
30
Count

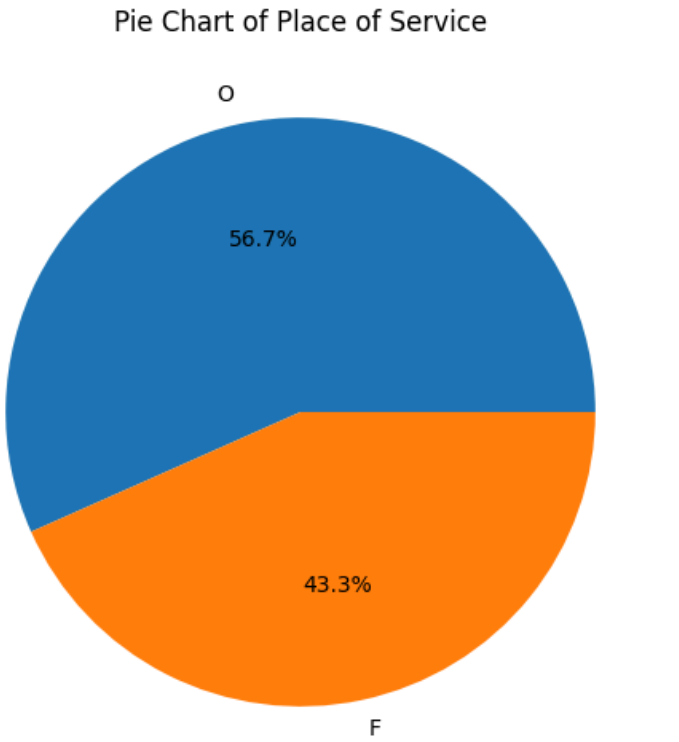

Bar Chart of Medicare Participation Indicator
Count
Medicare Participation Indicator
Y

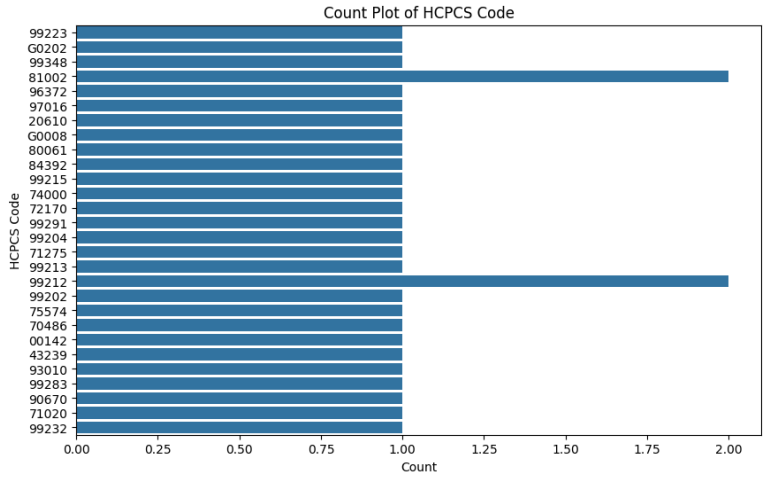

Pie Chart of Medicare Participation Indicator
Y
100.0%

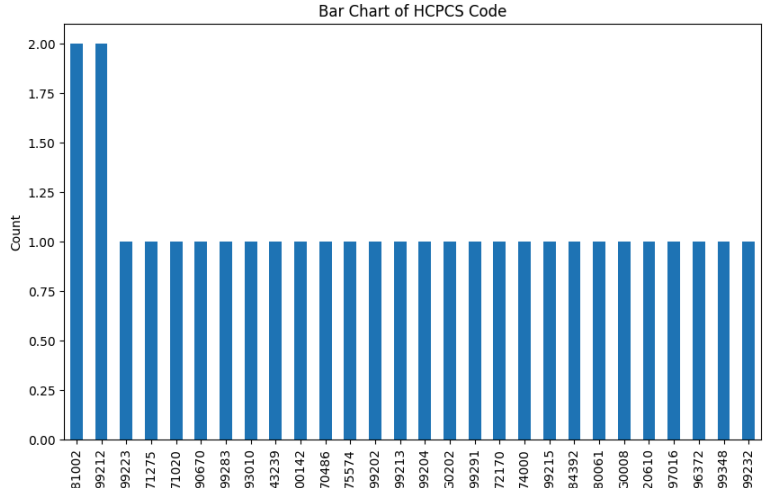

Count Plot of Place of Service
Place of Service
F
O
Count


Bar Chart of Place of Service

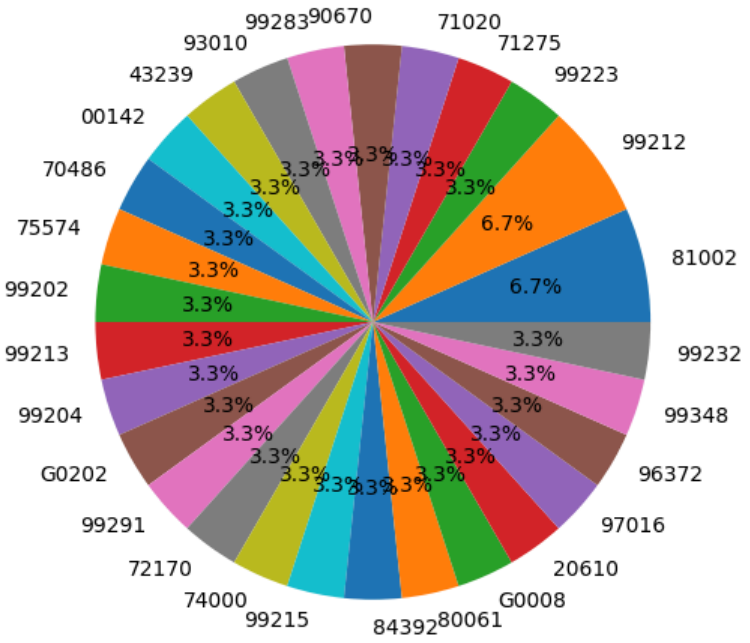

Count
Place of Service
O
F

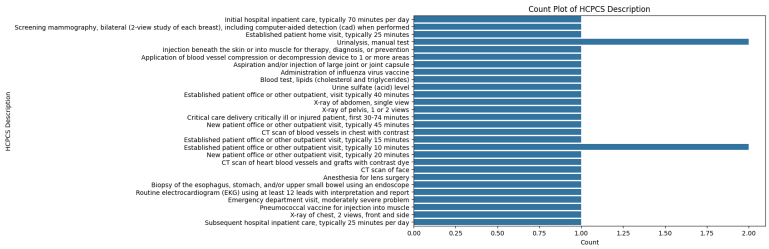

Pie Chart of Place of Service
O
56.7%
43.3%
F

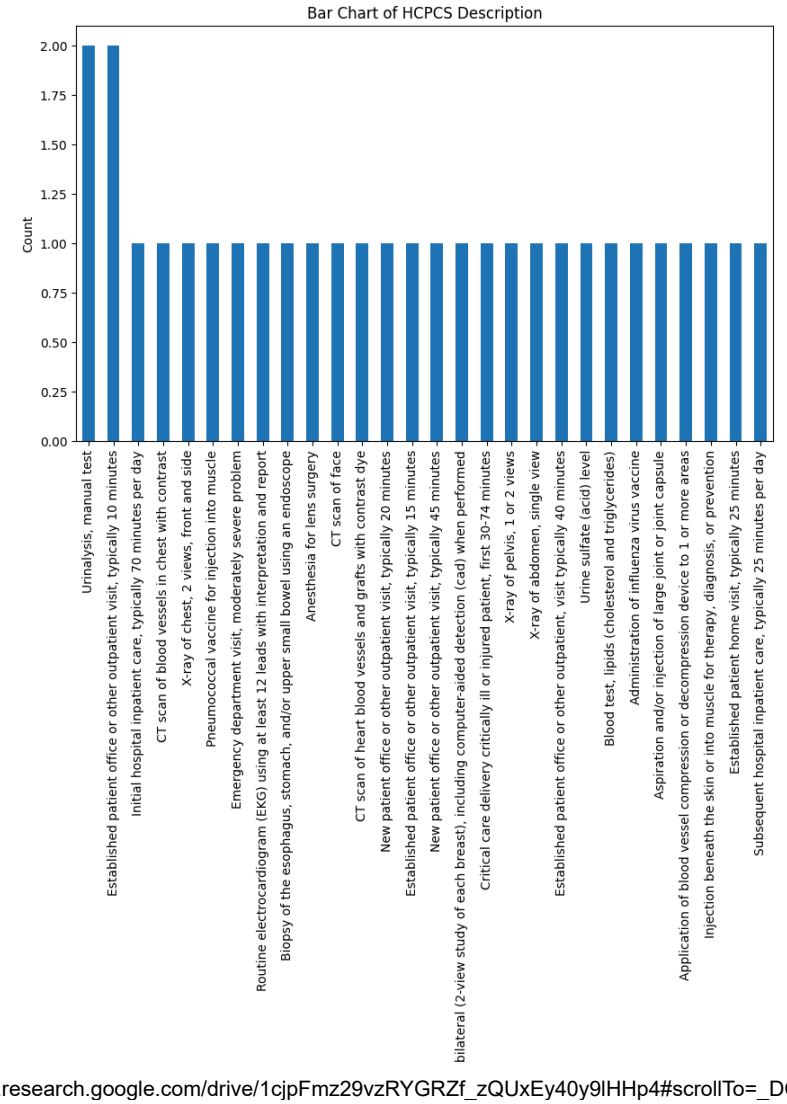

Count Plot of HCPCS Code
HCPCS Code
Count

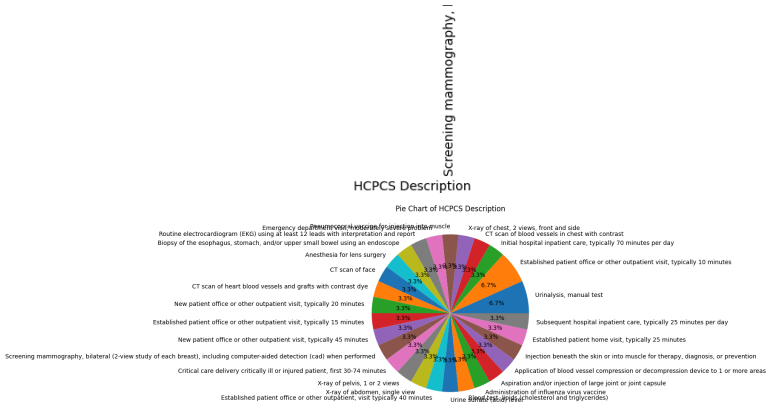

Bar Chart of HCPCS Code
Count

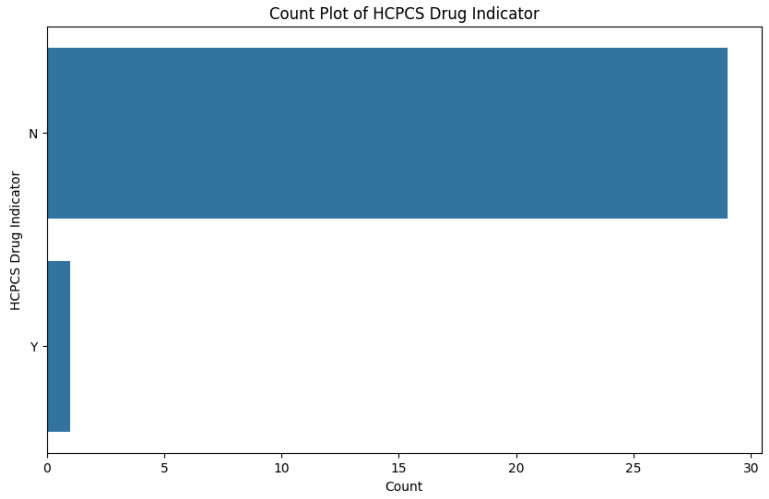
HCPCS Code

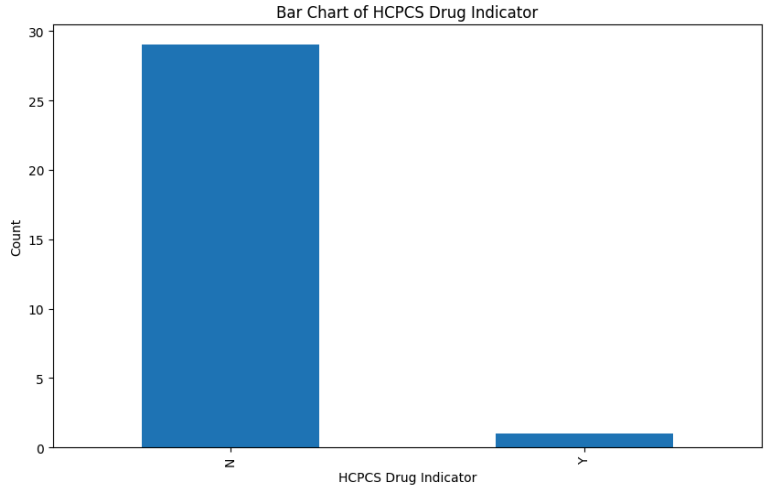

Pie Chart of HCPCS Code
99283
90670
71020
71275
99223
99212
81002
99232
99348
96372
97016
20610
G0008
80061
84392
99215
74000
72170
99291
G0202
99204
99213
99202
75574
70486
00142
43239
93010
3.3%
6.7%

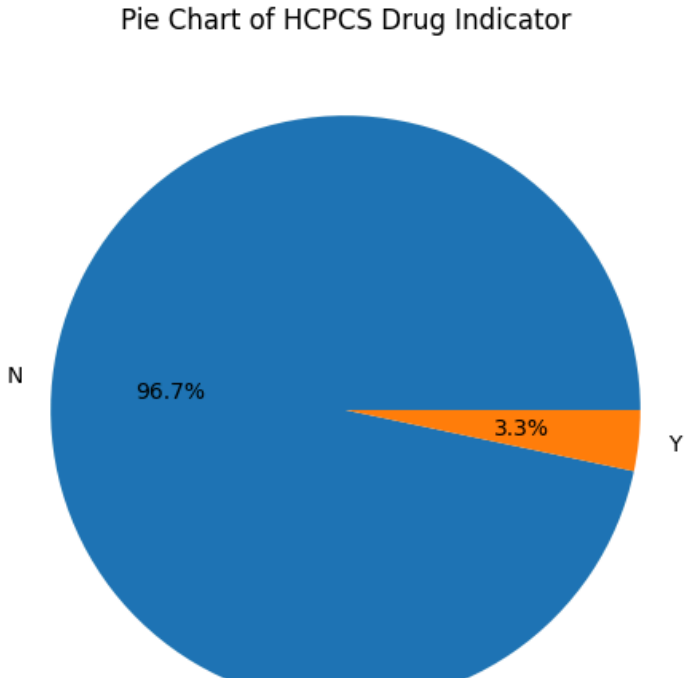

Count Plot of HCPCS Description
HCPCS Description
Count
Initial hospital inpatient care, typically 70 minutes per day
Screening mammography, bilateral (2-view study of each breast), including computer-aided detection (cad) when performed
Established patient home visit, typically 25 minutes
Urinalysis, manual test
Injection beneath the skin or into muscle for therapy, diagnosis, or prevention
Application of blood vessel compression or decompression device to 1 or more areas
Aspiration and/or injection of large joint or joint capsule
Administration of influenza virus vaccine
Blood test, lipids (cholesterol and triglycerides)
Urine sulfate (acid) level
Established patient office or other outpatient, visit typically 40 minutes
X-ray of abdomen, single view
X-ray of pelvis, 1 or 2 views
Critical care delivery critically ill or injured patient, first 30-74 minutes
New patient office or other outpatient visit, typically 45 minutes
CT scan of blood vessels in chest with contrast
Established patient office or other outpatient visit, typically 15 minutes
Established patient office or other outpatient visit, typically 10 minutes
New patient office or other outpatient visit, typically 20 minutes
CT scan of heart blood vessels and grafts with contrast dye
CT scan of face
Anesthesia for lens surgery
Biopsy of the esophagus, stomach, and/or upper small bowel using an endoscope
Routine electrocardiogram (EKG) using at least 12 leads with interpretation and report
Emergency department visit, moderately severe problem
Pneumococcal vaccine for injection into muscle
X-ray of chest, 2 views, front and side
Subsequent hospital inpatient care, typically 25 minutes per day
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00

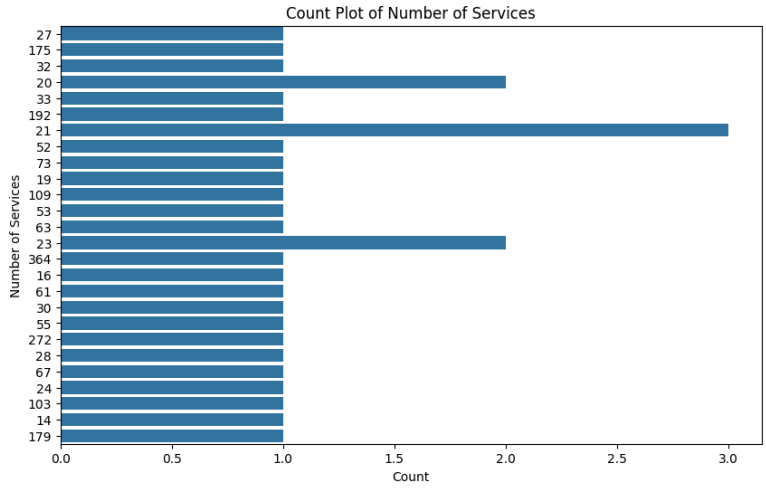

Bar Chart of HCPCS Description
Count
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00
Urinalysis, manual test
Established patient office or other outpatient visit, typically 10 minutes
Initial hospital inpatient care, typically 70 minutes per day
CT scan of blood vessels in chest with contrast
X-ray of chest, 2 views, front and side
Pneumococcal vaccine for injection into muscle
Emergency department visit, moderately severe problem
Routine electrocardiogram (EKG) using at least 12 leads with interpretation and report
Biopsy of the esophagus, stomach, and/or upper small bowel using an endoscope
Anesthesia for lens surgery
CT scan of face
CT scan of heart blood vessels and grafts with contrast dye
New patient office or other outpatient visit, typically 20 minutes
Established patient office or other outpatient visit, typically 15 minutes
New patient office or other outpatient visit, typically 45 minutes
bilateral (2-view study of each breast), including computer-aided detection (cad) when performed
Critical care delivery critically ill or injured patient, first 30-74 minutes
X-ray of pelvis, 1 or 2 views
X-ray of abdomen, single view
Established patient office or other outpatient, visit typically 40 minutes
Urine sulfate (acid) level
Blood test, lipids (cholesterol and triglycerides)
Administration of influenza virus vaccine
Aspiration and/or injection of large joint or joint capsule
Application of blood vessel compression or decompression device to 1 or more areas
Injection beneath the skin or into muscle for therapy, diagnosis, or prevention
Established patient home visit, typically 25 minutes
Subsequent hospital inpatient care, typically 25 minutes per day

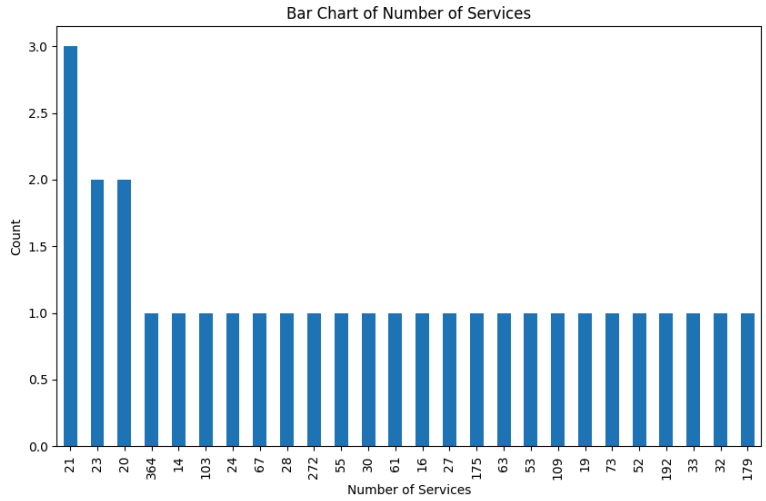

Screening mammography, |
HCPCS Description
Pie Chart of HCPCS Description
Emergency department visit for injury of muscle
X-ray of chest, 2 views, front and side
Routine electrocardiogram (EKG) using at least 12 leads with interpretation and report
CT scan of blood vessels in chest with contrast
Biopsy of the esophagus, stomach, and/or upper small bowel using an endoscope
Initial hospital inpatient care, typically 70 minutes per day
Anesthesia for lens surgery
Established patient office or other outpatient visit, typically 10 minutes
CT scan of face
Urinalysis, manual test
CT scan of heart blood vessels and grafts with contrast dye
New patient office or other outpatient visit, typically 20 minutes
Subsequent hospital inpatient care, typically 25 minutes per day
Established patient office or other outpatient visit, typically 15 minutes
Established patient home visit, typically 25 minutes
New patient office or other outpatient visit, typically 45 minutes
Injection beneath the skin or into muscle for therapy, diagnosis, or prevention
Screening mammography, bilateral (2-view study of each breast), including computer-aided detection (cad) when performed
Application of blood vessel compression or decompression device to 1 or more areas
Critical care delivery critically ill or injured patient, first 30-74 minutes
Aspiration and/or injection of large joint or joint capsule
X-ray of pelvis, 1 or 2 views
Administration of influenza virus vaccine
X-ray of abdomen, single view
Established patient office or other outpatient, visit typically 40 minutes
Urine bilirubin (dipstick)
Blood test, single (cholesterol and triglycerides)

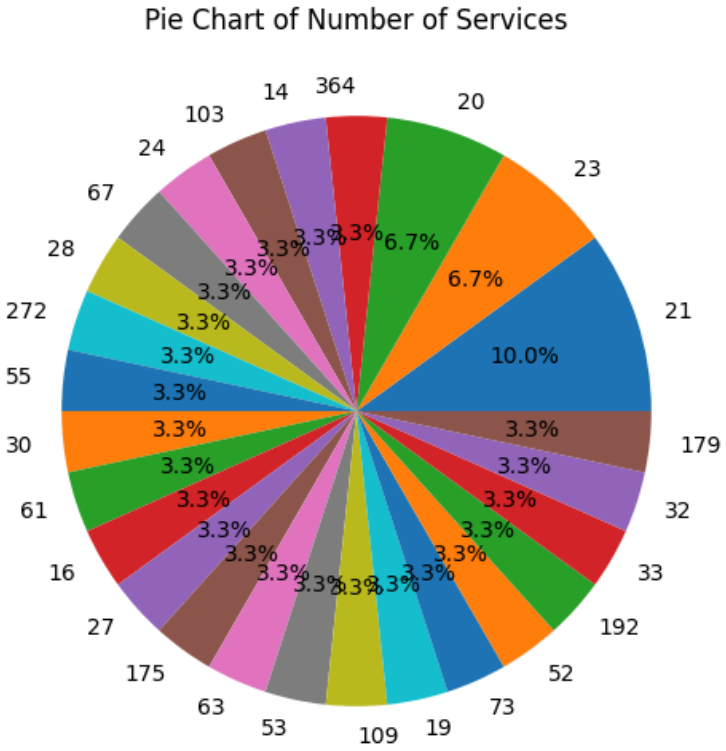

Count Plot of HCPCS Drug Indicator
HCPCS Drug Indicator
N
Y
0
5
10
15
20
25
30
Count

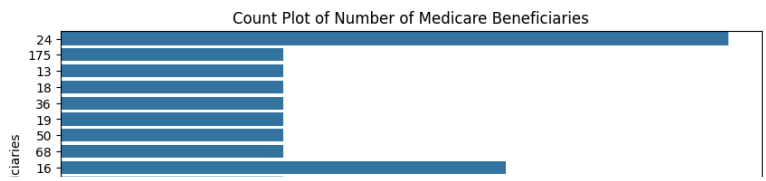

Bar Chart of HCPCS Drug Indicator
Count
0
5
10
15
20
25
30
N
Y
HCPCS Drug Indicator

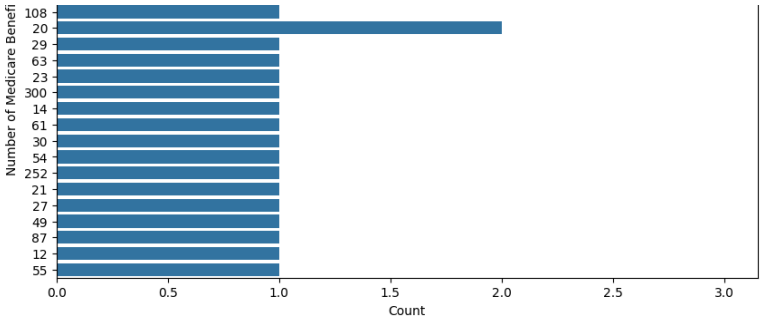

Pie Chart of HCPCS Drug Indicator
N
96.7%
3.3%
Y

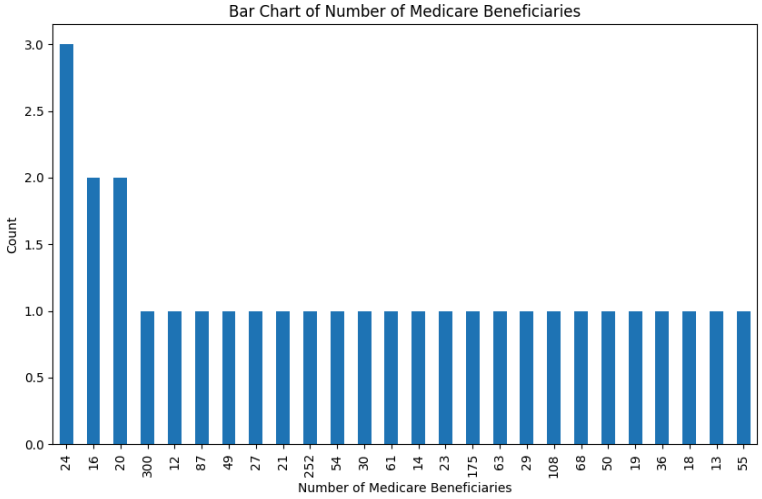

Count Plot of Number of Services
Number of Services
Count
27
175
32
20
33
192
21
52
73
19
109
53
63
23
364
16
61
30
55
272
28
67
24
103
14
179
0.0
0.5
1.0
1.5
2.0
2.5
3.0

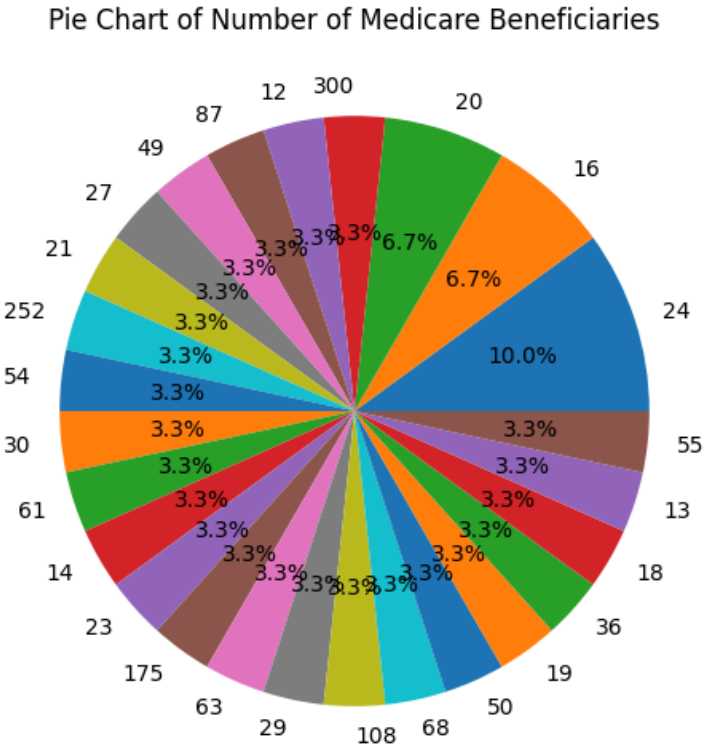

Bar Chart of Number of Services
Count
Number of Services
0.0
0.5
1.0
1.5
2.0
2.5
3.0
21
23
20
364
14
103
24
67
28
272
55
30
61
16
27
175
63
53
109
19
73
52
192
33
32
179

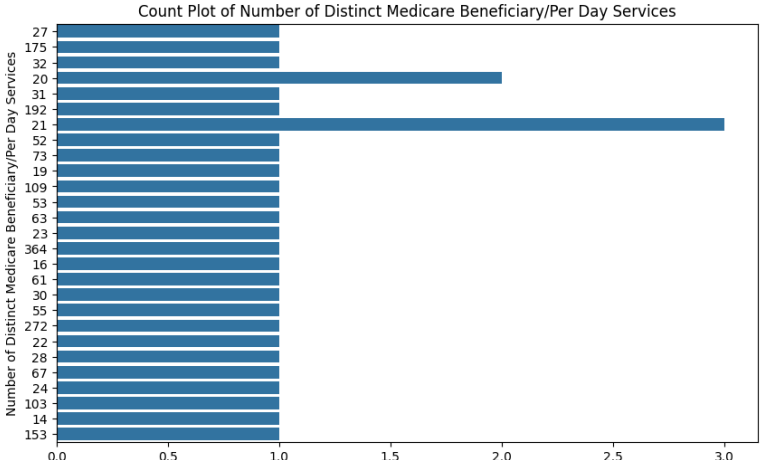

Pie Chart of Number of Services
21
10.0%
23
6.7%
20
6.7%
364
3.3%
14
3.3%
103
3.3%
24
3.3%
67
3.3%
28
3.3%
272
3.3%
55
3.3%
30
3.3%
61
3.3%
16
3.3%
27
3.3%
175
3.3%
63
3.3%
53
3.3%
109
3.3%
19
3.3%
73
3.3%
52
3.3%
192
3.3%
33
3.3%
32
3.3%
179
3.3%

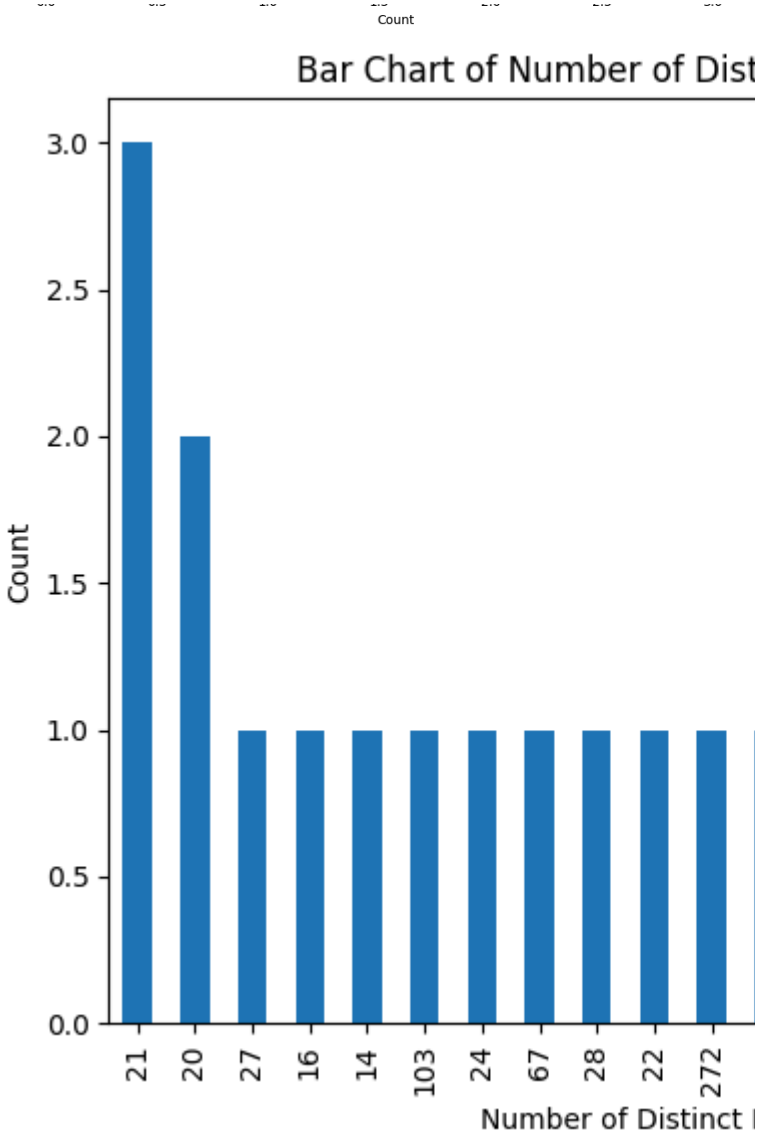

Count Plot of Number of Medicare Beneficiaries
24
175
13
18
36
19
50
68
16


Number of Medicare Benefi
108
20
29
63
23
300
14
61
30
54
252
21
27
49
87
12
55
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Count

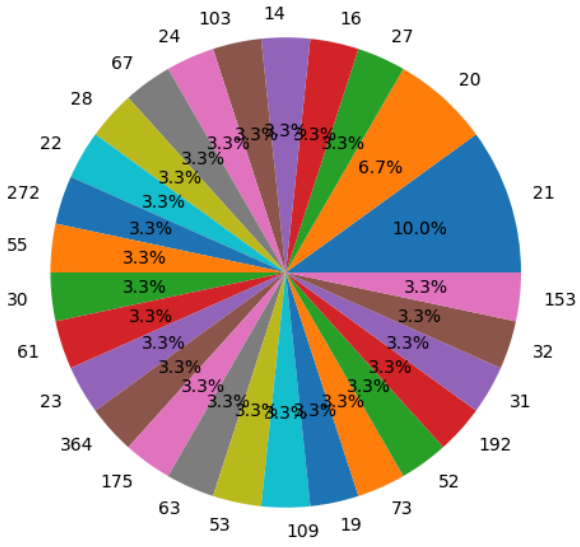

Bar Chart of Number of Medicare Beneficiaries
Count
0.0
0.5
1.0
1.5
2.0
2.5
3.0
24
16
20
300
12
87
49
27
21
252
54
30
61
14
23
175
63
29
108
68
50
19
36
18
13
55
Number of Medicare Beneficiaries

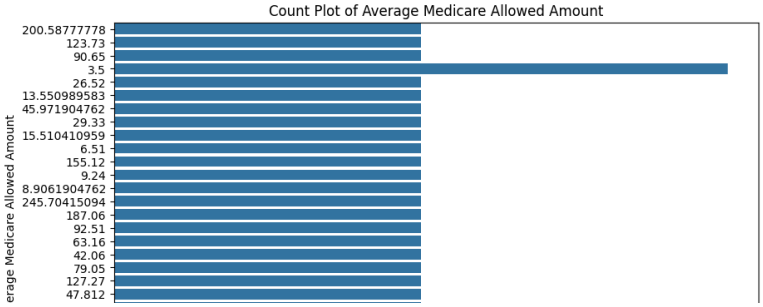

Pie Chart of Number of Medicare Beneficiaries
24
10.0%
16
6.7%
20
6.7%
300
12
87
49
27
21
252
54
30
61
14
23
175
63
29
108
68
50
19
36
18
13
55
3.3%

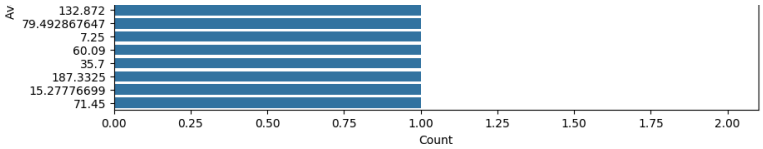

Count Plot of Number of Distinct Medicare Beneficiary/Per Day Services
Number of Distinct Medicare Beneficiary/Per Day Services
27
175
32
20
31
192
21
52
73
19
109
53
63
23
364
16
61
30
55
272
22
28
67
24
103
14
153
0.0
0.5
1.0
1.5
2.0
2.5
3.0

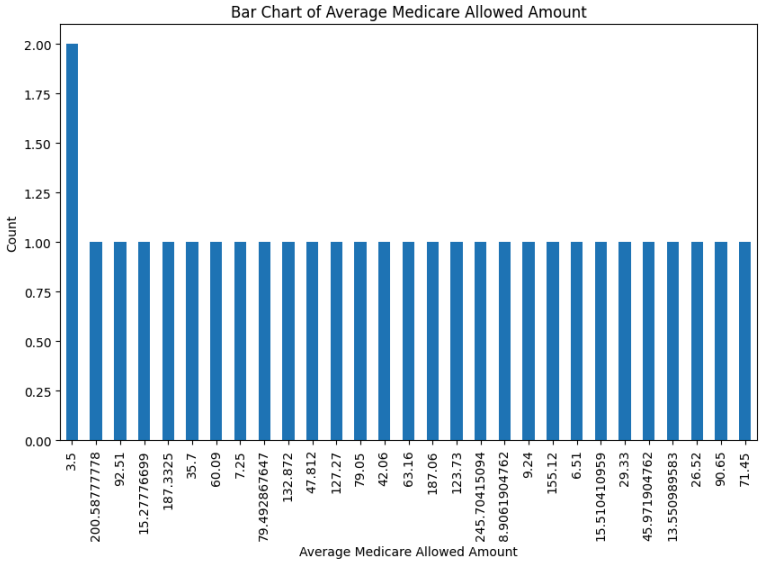


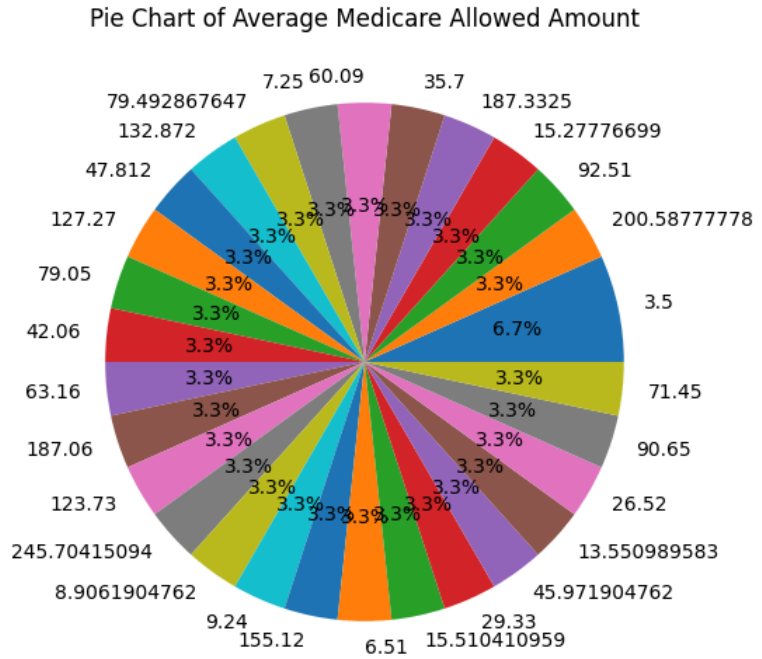
Pie Chart of Number of Distinct Medicare Beneficiary/Per Day Services

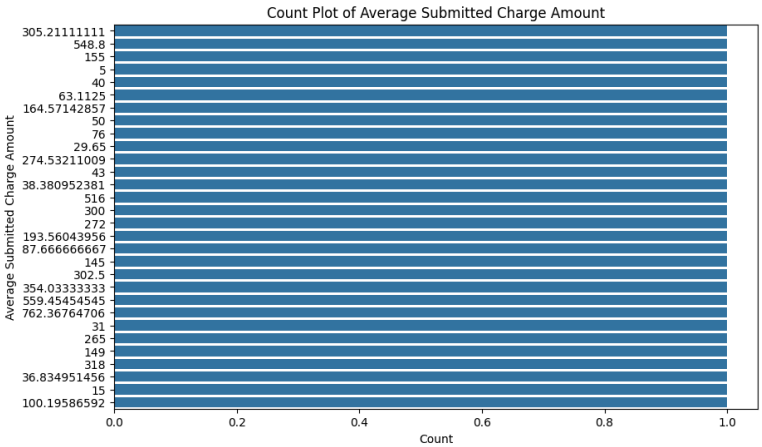


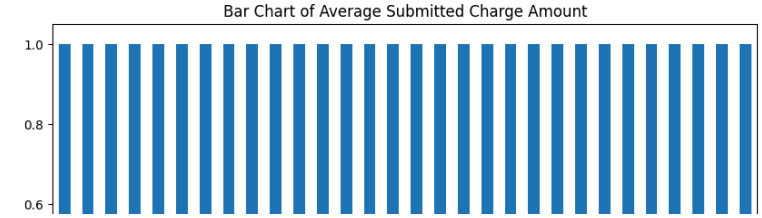


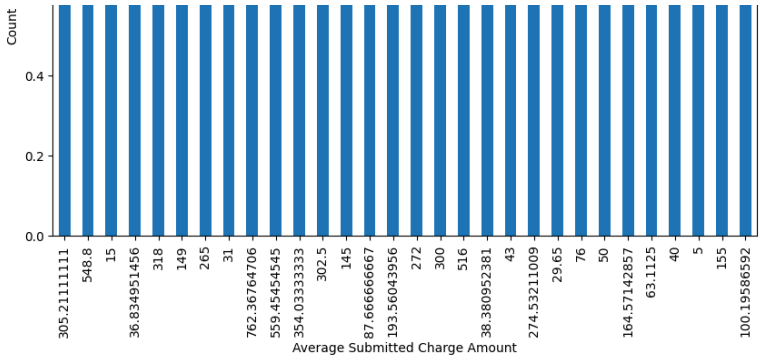

Av
132.872
79.492867647
7.25
60.09
35.7
187.3325
15.27776699
71.45
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00
Count


Bar Chart of Average Medicare Allowed Amount
Count
Average Medicare Allowed Amount

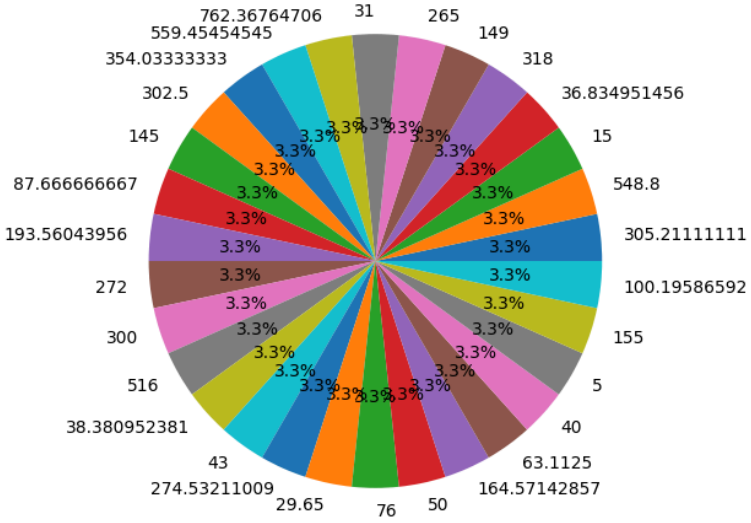

Pie Chart of Average Medicare Allowed Amount
7.25
60.09
35.7
187.3325
15.27776699
92.51
200.58777778
3.5
71.45
90.65
26.52
13.550989583
45.971904762
29.33
15.510410959
6.51
155.12
9.24
8.9061904762
245.70415094
123.73
187.06
63.16
42.06
79.05
127.27
47.812
132.872
79.492867647
3.3%
6.7%

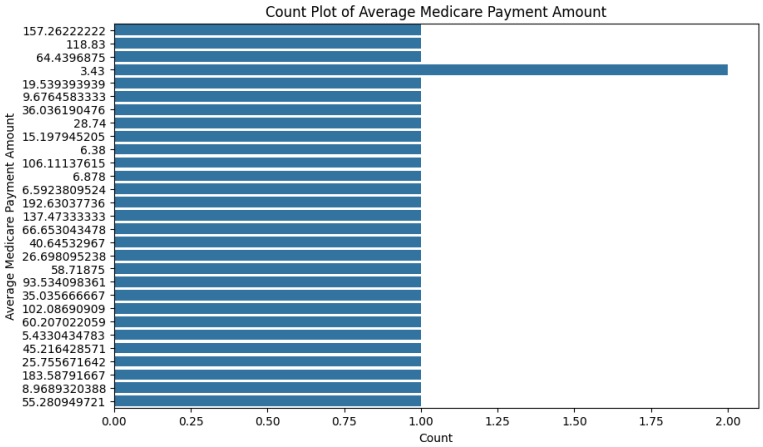

Count Plot of Average Submitted Charge Amount
Average Submitted Charge Amount
Count

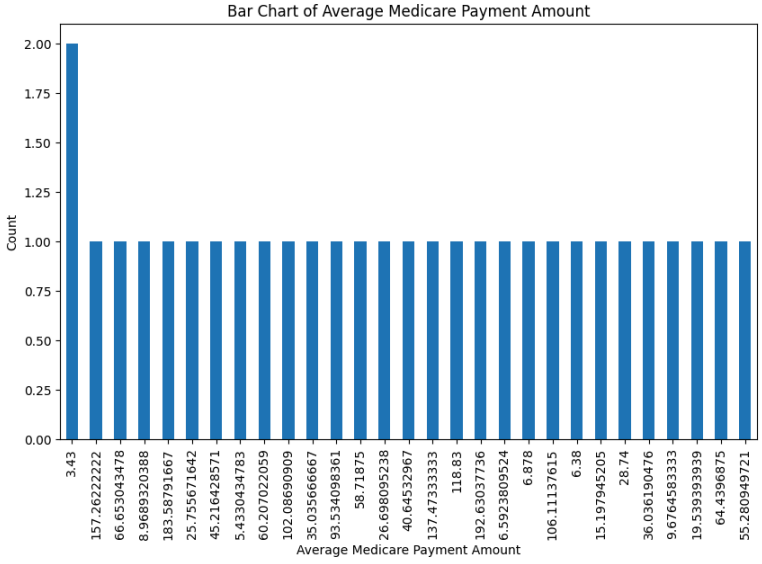

Bar Chart of Average Submitted Charge Amount



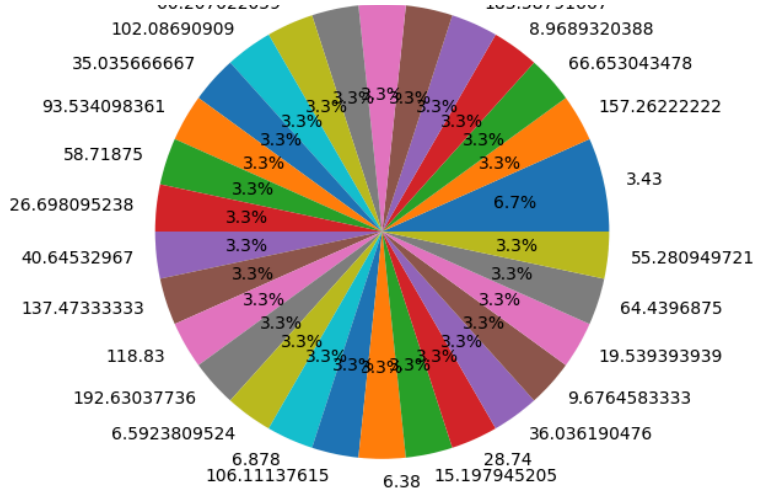
Pie Chart of Average Submitted Charge Amount

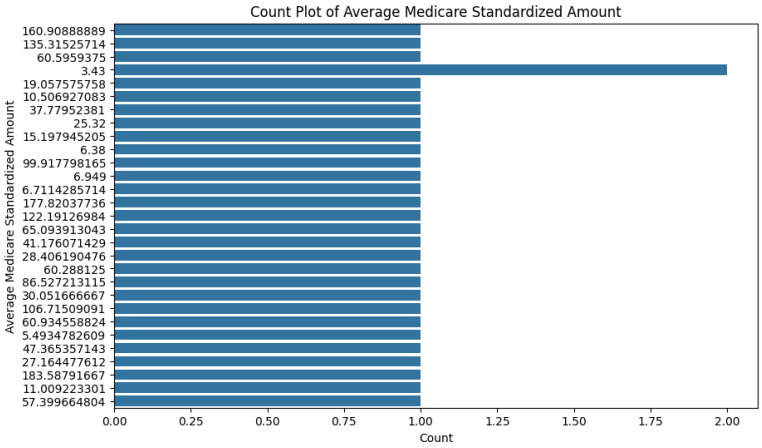


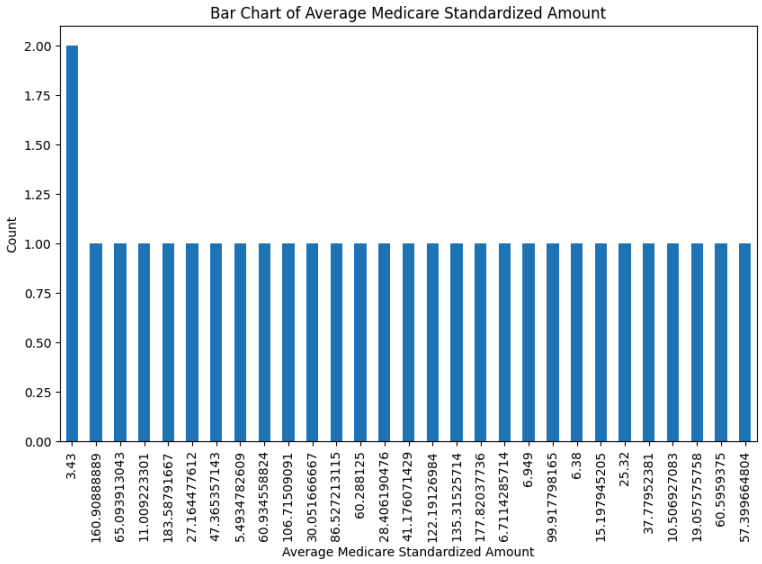




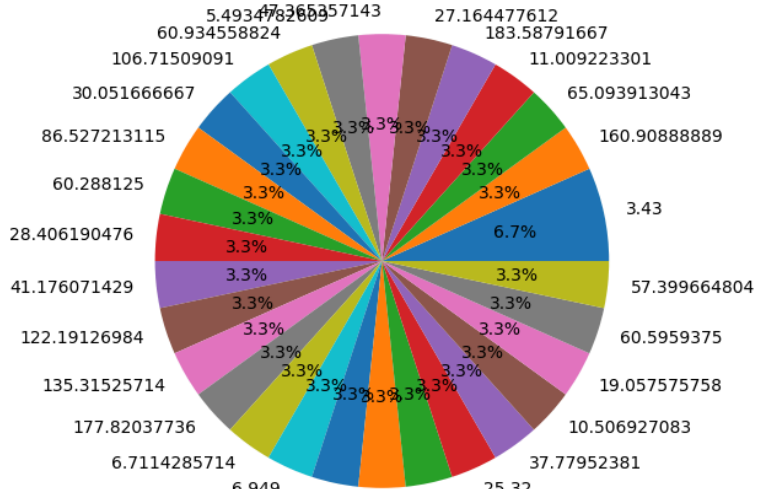
Pie Chart of Average Medicare Payment Amount







Pie Chart of Average Medicare Standardized Amount



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