```
import pandas as pd

# Load the dataset df =
pd.read_csv('df_file.csv')
print(df)
```

```
                                                   Text  Label
     0     Budget to set scene for election\n \n Gordon B...      0
     1     Army chiefs in regiments decision\n \n Militar...      0
     2     Howard denies split over ID cards\n \n Michael...      0
     3     Observers to monitor UK election\n \n Minister...      0
     4     Kilroy names election seat target\n \n Ex-chat...      0 ...
           ...    ...
     2220  India opens skies to competition\n \n India wi...      4
     2221  Yukos bankruptcy 'not US matter'\n \n Russian ...      4
     2222  Survey confirms property slowdown\n \n Governm...      4
     2223  High fuel prices hit BA's profits\n \n British...      4
     2224  US trade gap hits record in 2004\n \n The gap ...      4

     [2225 rows x 2 columns]
```

```
import pandas as pd

# Load the dataset df =
pd.read_csv('df_file.csv')

# Use describe() function to get summary statistics
summary = df.describe()

# Find the range with 0 values range_with_zeros =
summary.loc['min':'max'].loc[:, (summary == 0).any()]

print("Range with 0 values:")
print(range_with_zeros)
```

```
     Range with 0 values:
          Label
     min    0.0
     25%    1.0
     50%    2.0
     75%    3.0
     max    4.0
     import
     pandas as pd

# Load the dataset df =
pd.read_csv('df_file.csv')
```

```
# Use describe() function to get summary statistics
summary = df.describe()

# Find the range with 1 values range_with_ones =
summary.loc['min':'max'].loc[:, (summary == 1).any()]

print("Range with 1 values:")
print(range_with_ones)
```

```
Range with 1 values:
     Label
min    0.0
25%    1.0
50%    2.0
75%    3.0
max    4.0
```

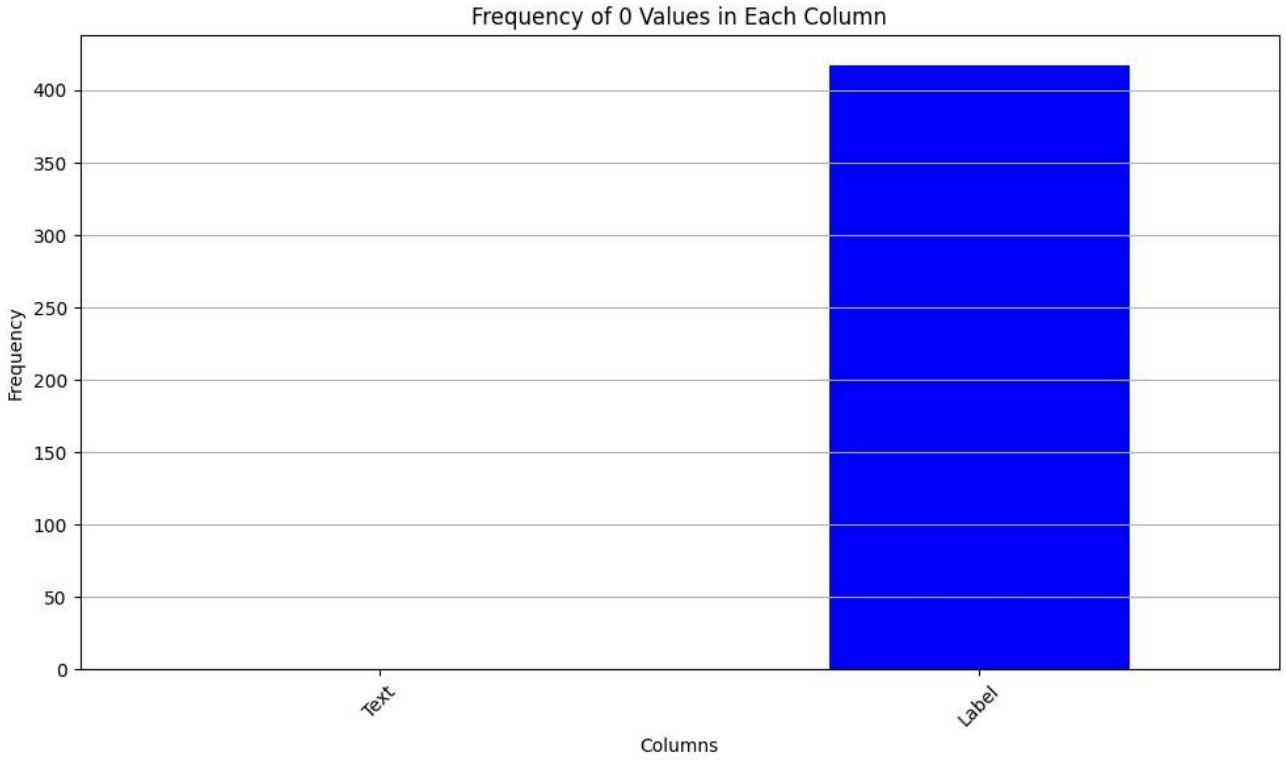
```
import pandas as pd

# Load the dataset df =
pd.read_csv('df_file.csv')

# Use describe() function to get summary statistics
summary = df.describe()

# Find the range with 2 values range_with_twos =
summary.loc['min':'max'].loc[:, (summary == 2).any()]

print("Range with 2 values:")
print(range_with_twos)
```

```
Range with 2 values:
     Label
min    0.0
25%    1.0
50%    2.0
75%    3.0
max    4.0
import
pandas as pd

# Load the dataset df =
pd.read_csv('df_file.csv')

# Use describe() function to get summary statistics
summary = df.describe()

# Find the range with 3 values range_with_threes =
summary.loc['min':'max'].loc[:, (summary == 3).any()]
```

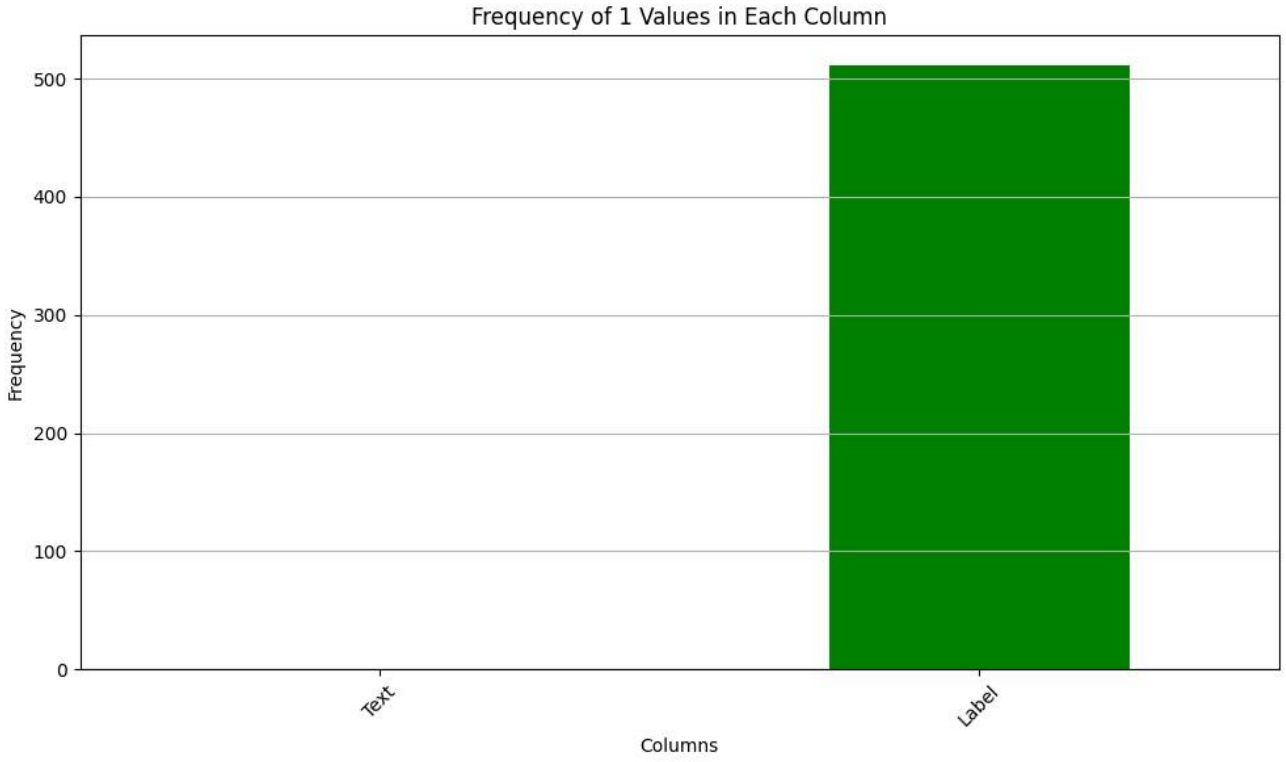
```
print("Range with 3 values:")
print(range_with_threes)
```

```
Range with 3 values:
       Label
min      0.0
25%      1.0
50%      2.0
75%      3.0
max      4.0
```

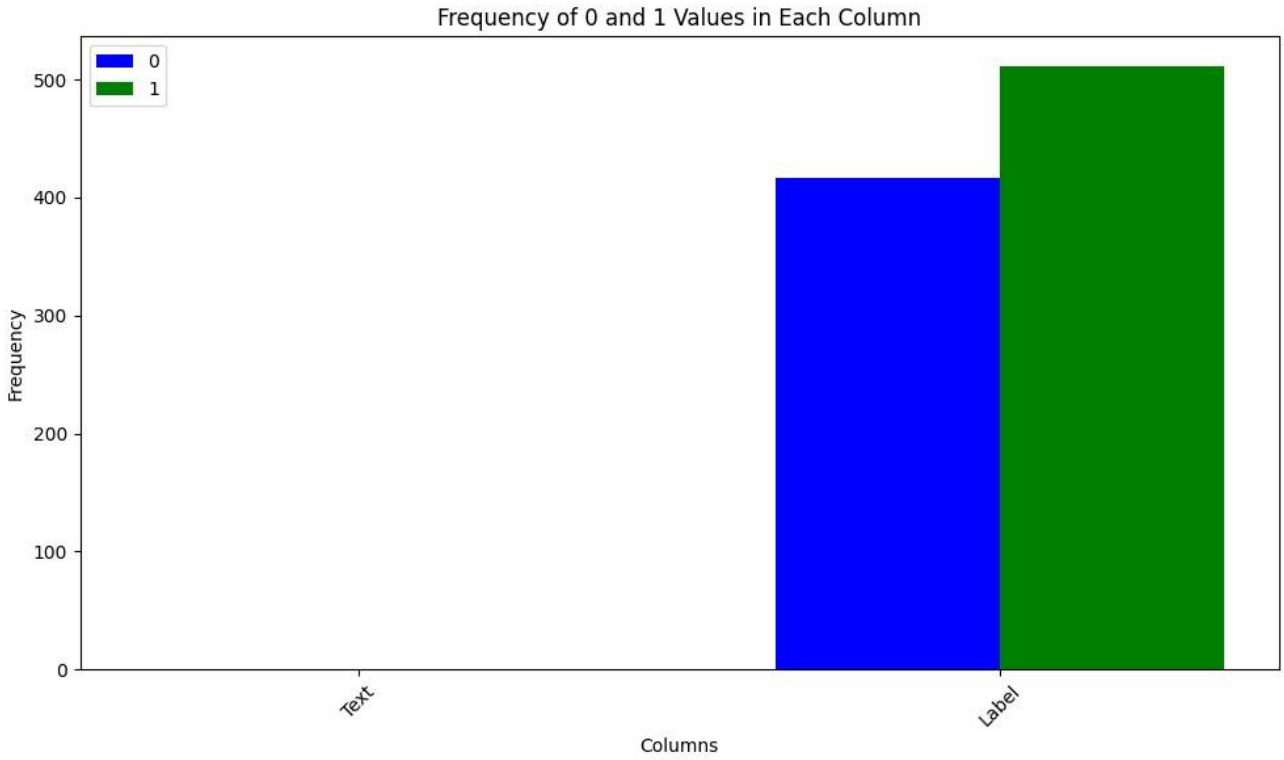
```
import pandas as pd import
matplotlib.pyplot as plt

# Load the dataset df =
pd.read_csv('df_file.csv')

# Count the frequency of 0 values in each column
zero_counts = (df == 0).sum()

# Plotting plt.figure(figsize=(10, 6))
zero_counts.plot(kind='bar', color='blue')
plt.title('Frequency of 0 Values in Each Column')
plt.xlabel('Columns') plt.ylabel('Frequency')
plt.xticks(rotation=45) plt.grid(axis='y')
plt.tight_layout() plt.show()
```



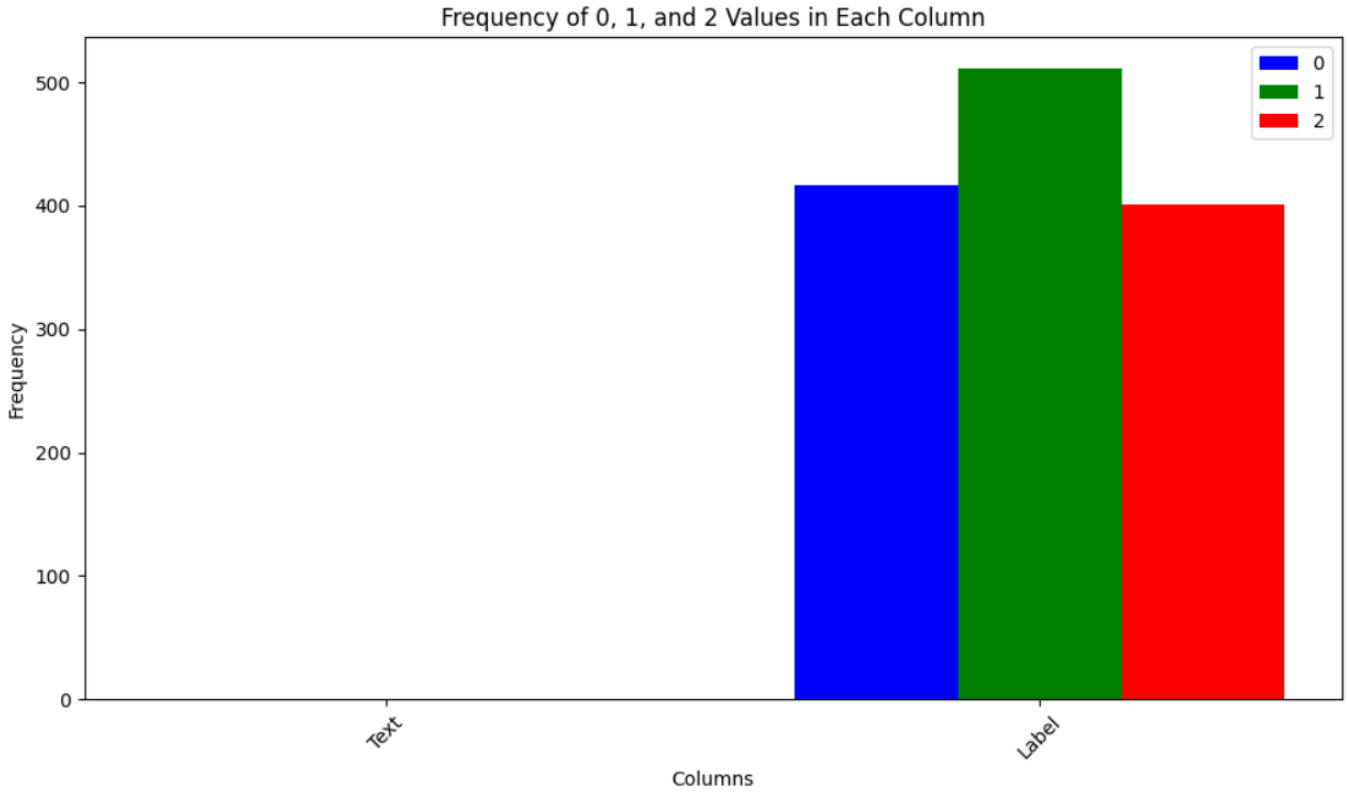
```
import pandas as pd import
matplotlib.pyplot as plt

# Load the dataset df =
pd.read_csv('df_file.csv')

# Count the frequency of 1 values in each column
one_counts = (df == 1).sum()

# Plotting plt.figure(figsize=(10, 6))
one_counts.plot(kind='bar', color='green')
plt.title('Frequency of 1 Values in Each Column')
plt.xlabel('Columns') plt.ylabel('Frequency')
plt.xticks(rotation=45) plt.grid(axis='y')
plt.tight_layout() plt.show()
```



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

# Load the dataset df =
pd.read_csv('df_file.csv')

# Count the frequency of 0 and 1 values in each column
zero_counts = (df == 0).sum() one_counts = (df ==
1).sum()

# Plotting
plt.figure(figsize=(10, 6))

# Width of each bar
bar_width = 0.35

# Index for x-axis index =
range(len(df.columns))

# Plotting bars for 0 values plt.bar(index, zero_counts,
bar_width, label='0', color='blue')

# Plotting bars for 1 values plt.bar([i + bar_width for i in index], one_counts,
bar_width, label='1', color='green')

# Labels, title, and legend plt.xlabel('Columns')
plt.ylabel('Frequency') plt.title('Frequency of 0 and 1 Values in Each
Column') plt.xticks([i + bar_width / 2 for i in index], df.columns,
rotation=45) plt.legend()

plt.tight_layout()
plt.show()
```


Frequency of 0 and 1 Values in Each Column
0
1
500
400
300
200
100
0
Frequency
Text
Label
Columns

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

# Load the dataset df =
pd.read_csv('df_file.csv')

# Count the frequency of 0, 1, and 2 values in each column
zero_counts = (df == 0).sum() one_counts = (df == 1).sum()
two_counts = (df == 2).sum()

# Plotting
plt.figure(figsize=(10, 6))

# Width of each bar
bar_width = 0.25

# Index for x-axis index =
range(len(df.columns))

# Plotting bars for 0 values
plt.bar(index, zero_counts, bar_width, label='0', color='blue')

# Plotting bars for 1 values plt.bar([i + bar_width for i in index], one_counts,
bar_width, label='1', color='green')

# Plotting bars for 2 values plt.bar([i + 2 * bar_width for i in index], two_counts,
bar_width, label='2', color='red

# Labels, title, and legend plt.xlabel('Columns')
plt.ylabel('Frequency') plt.title('Frequency of 0, 1, and 2 Values
in Each Column') plt.xticks([i + bar_width for i in index],
df.columns, rotation=45) plt.legend()

plt.tight_layout()
plt.show()
```




```
Import pandas as pd

# Load the dataset
df = pd.read_csv('df_file.csv')

# Use describe() function to get summary statistics
summary = df.describe()

# Find the range with 4 values
range_with_fours = summary.loc['min':'max'].loc[:, (summary == 4).any()]

print("Range with 4 values:")
print(range_with_fours)
```

```
Range with 4 values:
       Label
min      0.0
25%      1.0
50%      2.0
75%      3.0
max      4.0
```