```
In [92]: import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
df = sns.load_dataset("titanic")
```

```
In [94]:
          print(df.head())
          print(df.info())
          print(df.isnull().sum())
             survived
                        pclass
                                                sibsp
                                                                  fare embarked
                                                                                  class
                                    sex
                                          age
                                                       parch
          0
                    0
                             3
                                   male
                                         22.0
                                                    1
                                                            0
                                                                7.2500
                                                                               S
                                                                                  Third
                     1
                                                                               C
          1
                             1
                                female
                                         38.0
                                                    1
                                                            0
                                                                                  First
                                                               71.2833
          2
                     1
                             3
                                female
                                         26.0
                                                    0
                                                            0
                                                                7.9250
                                                                               S
                                                                                  Third
                                female
                                                                               S
          3
                     1
                             1
                                         35.0
                                                    1
                                                            0
                                                                                  First
                                                               53.1000
          4
                             3
                                                                               S
                    0
                                   male
                                         35.0
                                                    0
                                                                8.0500
                                                                                  Third
               who
                     adult male deck
                                       embark town alive
                                                            alone
          0
                           True
                                 NaN
                                       Southampton
                                                            False
               man
                                                       no
          1
             woman
                          False
                                    C
                                         Cherbourg
                                                            False
                                                      yes
          2
             woman
                          False NaN
                                       Southampton
                                                      yes
                                                             True
          3
                          False
                                    C
                                       Southampton
                                                           False
             woman
                                                      yes
          4
               man
                           True NaN Southampton
                                                       no
                                                             True
          <class 'pandas.core.frame.DataFrame'>
          RangeIndex: 891 entries, 0 to 890
          Data columns (total 15 columns):
           #
               Column
                             Non-Null Count
                                              Dtype
               -----
          - - -
                                               _ _ _ _ _
           0
                             891 non-null
                                               int64
               survived
           1
               pclass
                             891 non-null
                                               int64
           2
               sex
                             891 non-null
                                              object
           3
                                              float64
               age
                             714 non-null
           4
                                               int64
                             891 non-null
               sibsp
           5
               parch
                             891 non-null
                                              int64
           6
                                              float64
               fare
                             891 non-null
           7
               embarked
                             889 non-null
                                              object
           8
               class
                             891 non-null
                                               category
           9
                                              object
               who
                             891 non-null
           10
               adult_male
                             891 non-null
                                              bool
           11
               deck
                             203 non-null
                                              category
           12
               embark_town
                             889 non-null
                                              object
           13
               alive
                             891 non-null
                                              object
                                              bool
           14
               alone
                             891 non-null
          dtypes: bool(2), category(2), float64(2), int64(4), object(5)
          memory usage: 80.7+ KB
          None
                            0
          survived
          pclass
                            0
          sex
                            0
                          177
          age
          sibsp
                            0
          parch
                            0
                            0
          fare
          embarked
                            2
          class
                            0
          who
                            0
                            0
          adult male
          deck
                          688
          embark town
                            2
          alive
                            0
          alone
                            0
          dtype: int64
```

```
In [95]: df.drop(['deck'], axis=1, inplace=True) # too many nulls to handle
           df['age'].fillna(df['age'].median(), inplace=True)
           df.dropna(subset=['embarked'], inplace=True)
 In [96]: | sns.countplot(x='survived', data=df)
           plt.title("Survival Count")
           plt.savefig("survival_count.png")
           plt.clf()
           <Figure size 640x480 with 0 Axes>
 In [97]: | sns.heatmap(df.corr(numeric only=True), annot=True, cmap='coolwarm')
           plt.title("Correlation Heatmap")
           plt.savefig("correlation_heatmap.png")
           plt.clf()
           <Figure size 640x480 with 0 Axes>
 In [98]: | sns.boxplot(x='survived', y='age', data=df)
           plt.title("Age vs Survival")
           plt.savefig("age_survival_boxplot.png")
           plt.clf()
           <Figure size 640x480 with 0 Axes>
In [101]:
           import pandas_profiling
           profile = df.profile report(title="Titanic EDA Report")
           profile.to_file("titanic_eda_report.html")
           C:\Users\admin\anaconda3\Lib\site-packages\ydata_profiling\profile_report.py:
           365: UserWarning: Try running command: 'pip install --upgrade Pillow' to avoi
           d ValueError
             warnings.warn(
           Summarize dataset:
                                                                 39/39 [00:02<00:00, 11.25it/s,
           100%
                                                                 Completed]
           100%
                     | 14/14 [00:00<00:00, 824.36it/s]
           Generate report structure:
                                                                          1/1 [00:03<00:00,
           100%
                                                                          3.13s/it]
           Render HTML: 100%
                                                                       1/1 [00:00<00:00, 1.38it/s]
           Export report to file:
                                                                        1/1 [00:00<00:00,
           100%
                                                                        71.77it/s]
```

In []: