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1 C:\Users\kavan\PyCharmMiscProject\.venv\Scripts\python.exe "C:\Users\kavan\
  PyCharmMiscProject\PYTHON INTERNSHIP\task 5.py"
2 ===== INITIAL DATA PREVIEW =====
3   PassengerId  Survived  Pclass  ...      Fare Embarked  Cabin
4 0            1         0        3  ...    7.2500         S      NaN
5 1            2         1        1  ...   71.2833         C      C85
6 2            3         1        3  ...    7.9250         S      NaN
7 3            4         1        1  ...   53.1000         S     C123
8 4            5         0        3  ...   8.0500         S      NaN
9
10 [5 rows x 11 columns]
11
12 ===== DATASET INFO =====
13 <class 'pandas.core.frame.DataFrame'>
14 RangeIndex: 20 entries, 0 to 19
15 Data columns (total 11 columns):
16 #   Column      Non-Null Count  Dtype
17 ---  ---
18 0   PassengerId  20 non-null     int64
19 1   Survived     20 non-null     int64
20 2   Pclass       20 non-null     int64
21 3   Name         20 non-null     object
22 4   Sex          20 non-null     object
23 5   Age         17 non-null     float64
24 6   SibSp        20 non-null     int64
25 7   Parch        20 non-null     int64
26 8   Fare         20 non-null     float64

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27 9 Embarked 20 non-null object
28 10 Cabin 4 non-null object
29 dtypes: float64(2), int64(5), object(4)
30 memory usage: 1.8+ KB
31 None
32
33 ===== MISSING VALUES (BEFORE CLEANING) =====
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```
34 PassengerId 0
35 Survived 0
36 Pclass 0
37 Name 0
38 Sex 0
39 Age 3
40 SibSp 0
41 Parch 0
42 Fare 0
43 Embarked 0
44 Cabin 16
```

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45 dtype: int64
```

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46 C:\Users\kavan\PyCharmMiscProject\PYTHON INTERNSHIP\task 5.py:31: FutureWarning: A
value is trying to be set on a copy of a DataFrame or Series through chained
assignment using an inplace method.
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47 The behavior will change in pandas 3.0. This inplace method will never work because
the intermediate object on which we are setting values always behaves as a copy.
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48
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49 For example, when doing 'df[col].method(value, inplace=True)', try using 'df.method
({col: value}, inplace=True)' or df[col] = df[col].method(value) instead, to perform
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49 the operation inplace on the original object.
50
51
52 df['Age'].fillna(df['Age'].median(), inplace=True)
53 C:\Users\kavan\PyCharmMiscProject\PYTHON INTERNSHIP\task 5.py:34: FutureWarning: A
    value is trying to be set on a copy of a DataFrame or Series through chained
    assignment using an inplace method.
54 The behavior will change in pandas 3.0. This inplace method will never work because
    the intermediate object on which we are setting values always behaves as a copy.
55
56 For example, when doing 'df[col].method(value, inplace=True)', try using 'df.method
    ({col: value}, inplace=True)' or df[col] = df[col].method(value) instead, to perform
    the operation inplace on the original object.
57
58
59 df['Embarked'].fillna(df['Embarked'].mode()[0], inplace=True)
60
61 Duplicates removed: 0
62
63 ===== MISSING VALUES (AFTER CLEANING) =====
64 PassengerId      0
65 Survived         0
66 Pclass          0
67 Name            0
68 Sex             0
69 Age             0
70 SibSp           0

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71 Parch          0
72 Fare           0
73 Embarked       0
74 Age_Group      0
75 dtype: int64
76
77 ===== FINAL DATASET INFO =====
78 <class 'pandas.core.frame.DataFrame'>
79 RangeIndex: 20 entries, 0 to 19
80 Data columns (total 11 columns):
81  #   Column        Non-Null Count  Dtype
82  ---  ---
83  0   PassengerId    20 non-null      int64
84  1   Survived       20 non-null      category
85  2   Pclass         20 non-null      category
86  3   Name           20 non-null      object
87  4   Sex            20 non-null      object
88  5   Age            20 non-null      float64
89  6   SibSp          20 non-null      int64
90  7   Parch          20 non-null      int64
91  8   Fare           20 non-null      float64
92  9   Embarked       20 non-null      object
93  10  Age_Group      20 non-null      object
94 dtypes: category(2), float64(2), int64(3), object(4)
95 memory usage: 1.8+ KB
96 None
97

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```
98 ===== FINAL DATA PREVIEW =====
99 PassengerId Survived Pclass ... Fare Embarked Age_Group
100 0 1 0 3 ... 7.2500 S Adult
101 1 2 1 1 ... 71.2833 C Adult
102 2 3 1 3 ... 7.9250 S Adult
103 3 4 1 1 ... 53.1000 S Adult
104 4 5 0 3 ... 8.0500 S Adult
105
106 [5 rows x 11 columns]
107
108 □ Cleaned dataset saved as 'cleaned_data.csv'
109
110 Process finished with exit code 0
111
```