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In [1]: #task2
import pandas as pd
import seaborn as sns
from sklearn.model_selection import train_test_split
from sklearn.linear_model import LogisticRegression
from sklearn.metrics import accuracy_score

# Load Titanic dataset from seaborn
data = sns.load_dataset('titanic')

# Drop rows with missing values in the selected columns
data = data.dropna(subset=['age', 'fare', 'embarked'])

# Select features and target, and encode categorical variables
X = data[['age', 'fare', 'pclass', 'sex', 'embarked']].copy()
X['sex'] = X['sex'].map({'male': 0, 'female': 1})
X['embarked'] = X['embarked'].map({'C': 0, 'Q': 1, 'S': 2})
y = data['survived']

# Split the data into training and testing sets
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)

# Train the Logistic Regression model
model = LogisticRegression(max_iter=1000).fit(X_train, y_train)

# Predict and evaluate the model
predictions = model.predict(X_test)
print(f'Accuracy: {accuracy_score(y_test, predictions):.2f}')

Accuracy: 0.79
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In [ ]:
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