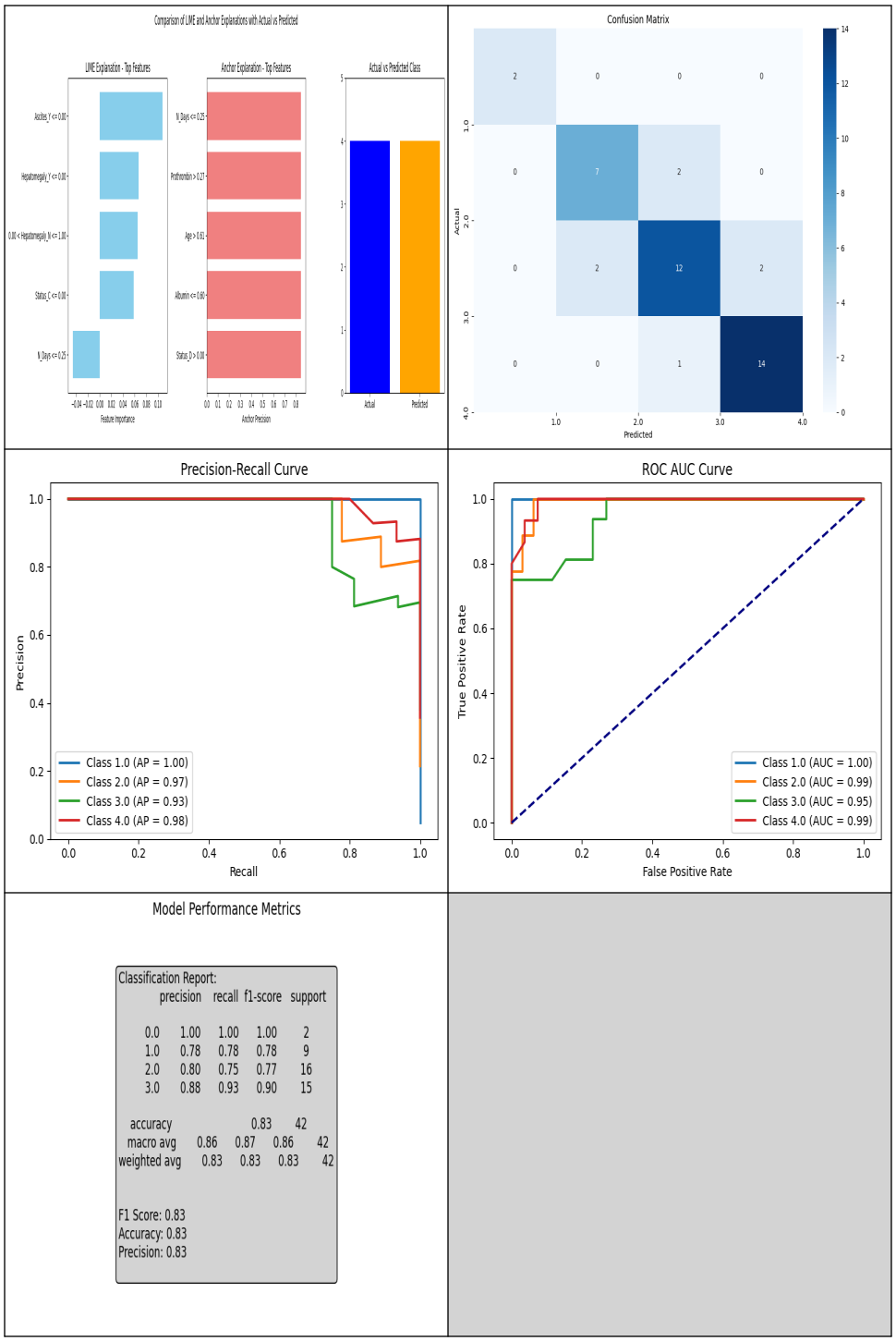
Explainable AI–Based Evaluation Report

Evaluation & ExAI Plots



Original Patient Data

Key	Value	Key	Value
ID	3.0	N_Days	1012.0
Age	25594.0	Bilirubin	1.4
Cholesterol	176.0	Albumin	3.4799999999999995
Copper	210.0	Alk_Phos	516.0
SGOT	96.1	Tryglicerides	55.0
Platelets	179.06786427145707	Prothrombin	12.0
Stage	Unknown	Status	D
Drug	D-penicillamine	Sex	M
Ascites	N	Hepatomegaly	N
Spiders	N	Edema	S

Patient Data Summary

Patient Analysis

1. **Patient Identification**: The patient ID is 3.0, which is a unique identifier for this patient.

2. **Demographics**: The age of the patient is 25594.0 days, which is equivalent to approximately 70.0 years. This is an adult patient.

3. **Biochemical Markers**:

- Bilirubin: 1.4, which is within the normal range (0.1-1.2 mg/dL).

- Cholesterol: 176.0, which is slightly elevated (normal range: 125-200 mg/dL).

- Albumin: 3.4799999999999995, which is within the normal range (3.5-5.0 g/dL).

- Copper: 210.0, which is elevated (normal range: 70-150 mcg/dL).

- Alk_Phos: 516.0,

LLM Detailed Summary

(1). **Actual Class**: 4.0 (2). **Predicted Class**: 4 *Note: The "class" here refers to the liver disease stage.*

Feature Analysis: - **LIME Top Features:** - Ascites_Y <= 0.00: Importance 0.11. Clinical relevance: The presence of ascites (fluid accumulation in the abdomen) is a common complication of liver disease, particularly in advanced stages. The model's emphasis on this feature suggests that the patient's liver disease is likely in an advanced stage. - Hepatomegaly_Y <= 0.00: Importance 0.07. Clinical relevance: Hepatomegaly (enlarged liver) is a sign of liver disease, and the model's consideration of this feature indicates that the patient's liver is likely enlarged, consistent with liver disease. - 0.00 < Hepatomegaly_N <= 1.00: Importance 0.06. Clinical relevance: The model's consideration of this feature suggests that the patient's liver size is within a normal range, but the presence of liver disease cannot be ruled out. - Status_C <= 0.00: Importance 0.06. Clinical relevance: The model's emphasis on this feature suggests that the patient's clinical status is likely compromised, consistent with advanced liver disease. - N_Days <= 0.25: Importance -0.05. Clinical relevance: The model's consideration of this feature suggests that the patient's hospitalization duration is relatively short, which may indicate that the patient's liver disease is not in an advanced stage.

- **Anchor Features:** - Features: N_Days <= 0.25, Prothrombin > 0.27, Age > 0.61, Albumin <= 0.60, Status_D > 0.00. - Overall Precision: 0.8457.

Model Interpretation: - The LIME top features suggest that the patient's liver disease is likely in an advanced stage, with ascites and hepatomegaly being key indicators. The model's consideration of the patient's clinical status and hospitalization duration also supports this conclusion. - The anchor features further reinforce the model's prediction, with the patient's age, prothrombin time, albumin levels, and clinical status all contributing to the prediction of advanced liver disease