Model Comparison Summary

# Logistic Regression

Accuracy: see report

F1-Score: see report

AUC: see report

Strengths: Simple, interpretable, fast, good baseline

Weaknesses: May underfit, less powerful for complex patterns

Fairness: Check bias in confusion matrix and metrics by group

Explainability: High (coefficients)

# XGBoost

Accuracy: see report

F1-Score: see report

AUC: see report

Strengths: Handles nonlinearity, high accuracy, robust to outliers

Weaknesses: Less interpretable, can overfit, slower

Fairness: Check bias in confusion matrix and metrics by group

Explainability: Medium (feature importance, SHAP possible)

# Recommendation

If accuracy and AUC are significantly higher for XGBoost, use XGBoost. If interpretability is critical, use Logistic Regression.