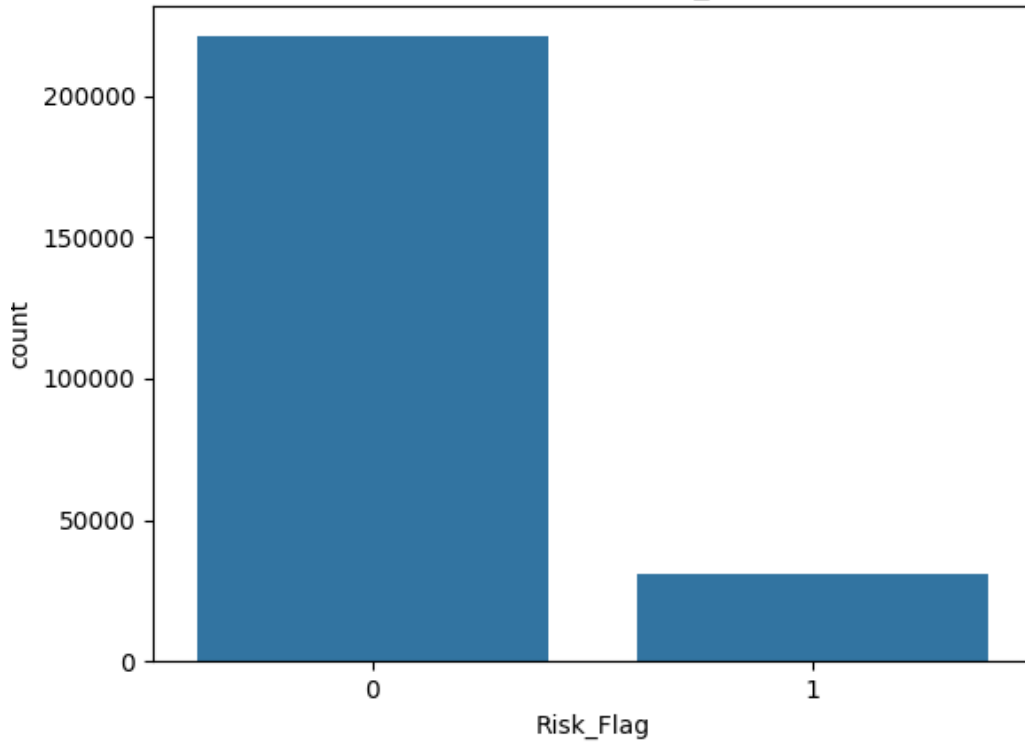


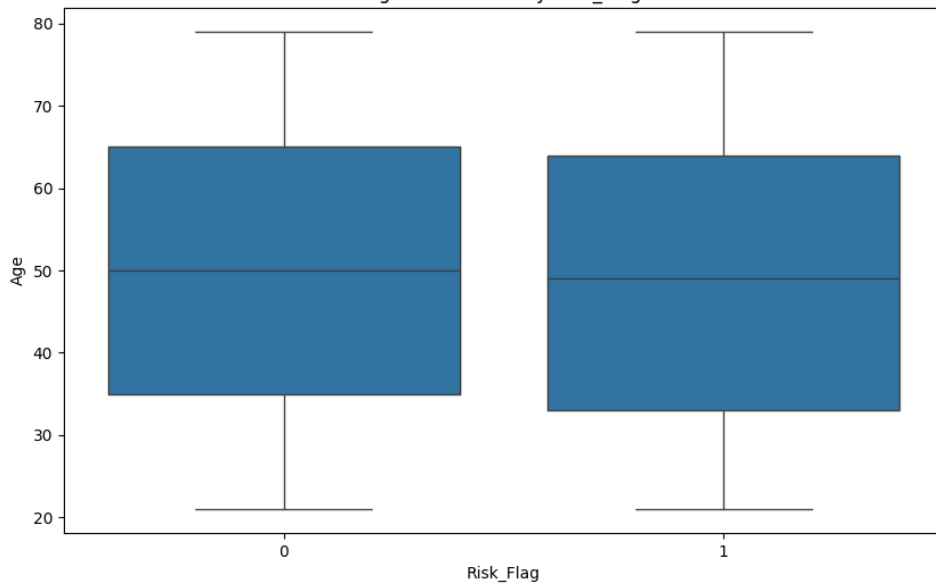
Loan Approval Risk Prediction Report

Data Visualizations

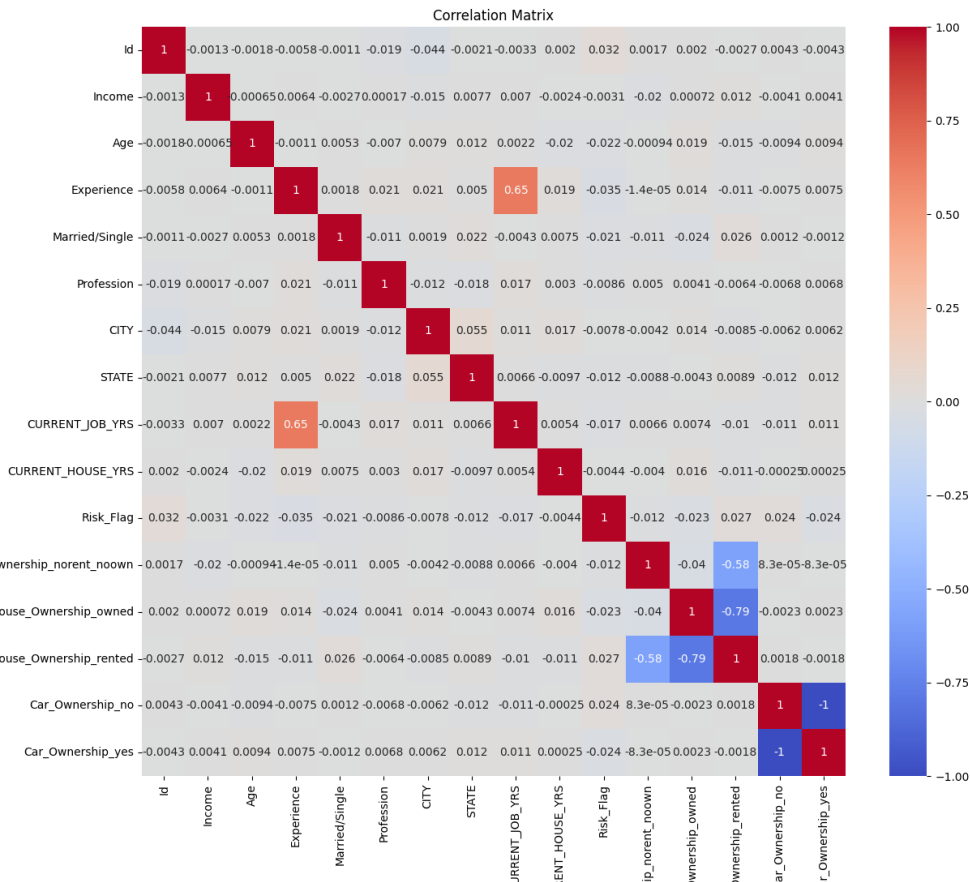
Distribution of Risk_Flag



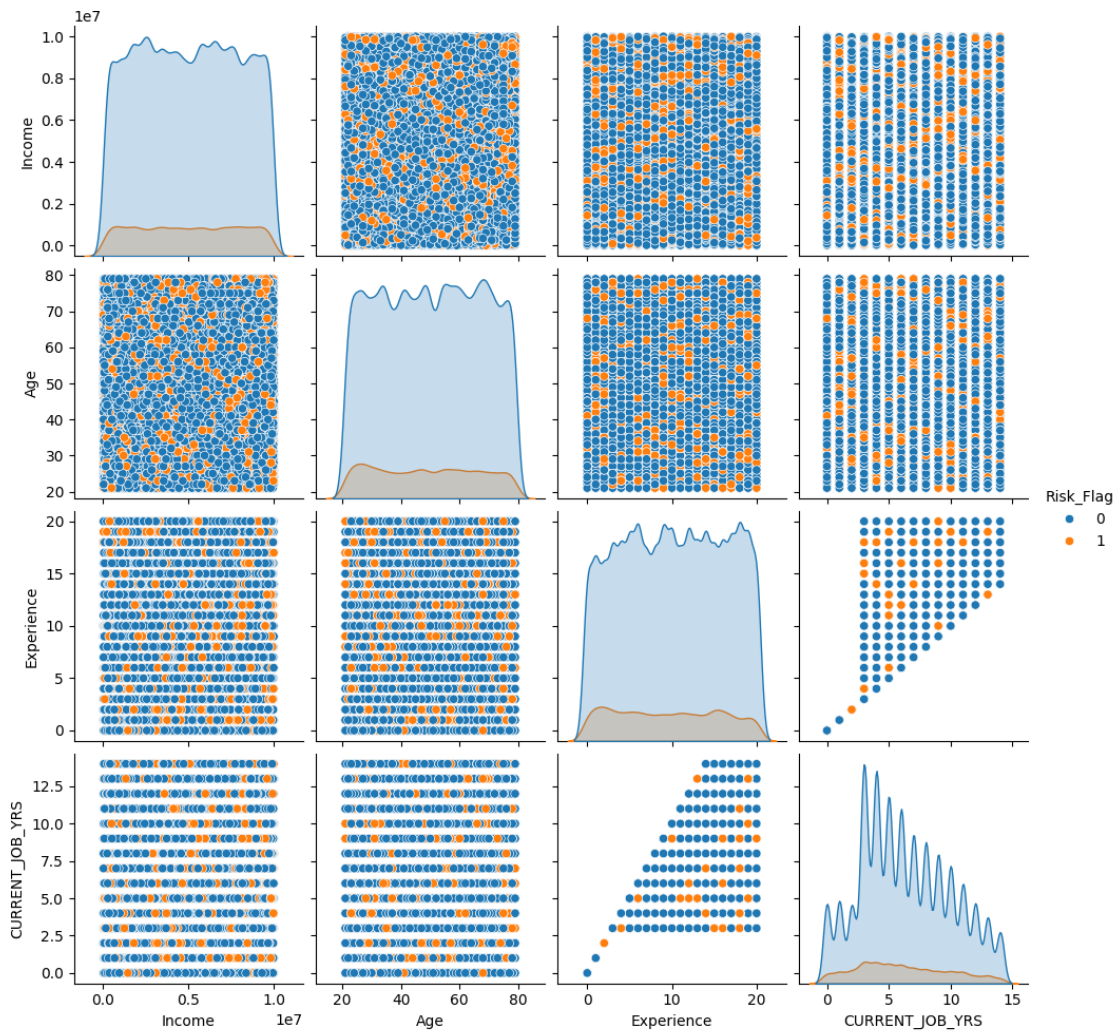
Age Distribution by Risk_Flag



Loan Approval Risk Prediction Report



Loan Approval Risk Prediction Report



Loan Approval Risk Prediction Report

Data Exploration Insights

Dataset contains 252000 rows and 16 columns.

Loan Approval Risk Prediction Report

Model Performance

Random Forest:

Accuracy: 0.9044

Precision: 0.6545

Recall: 0.4555

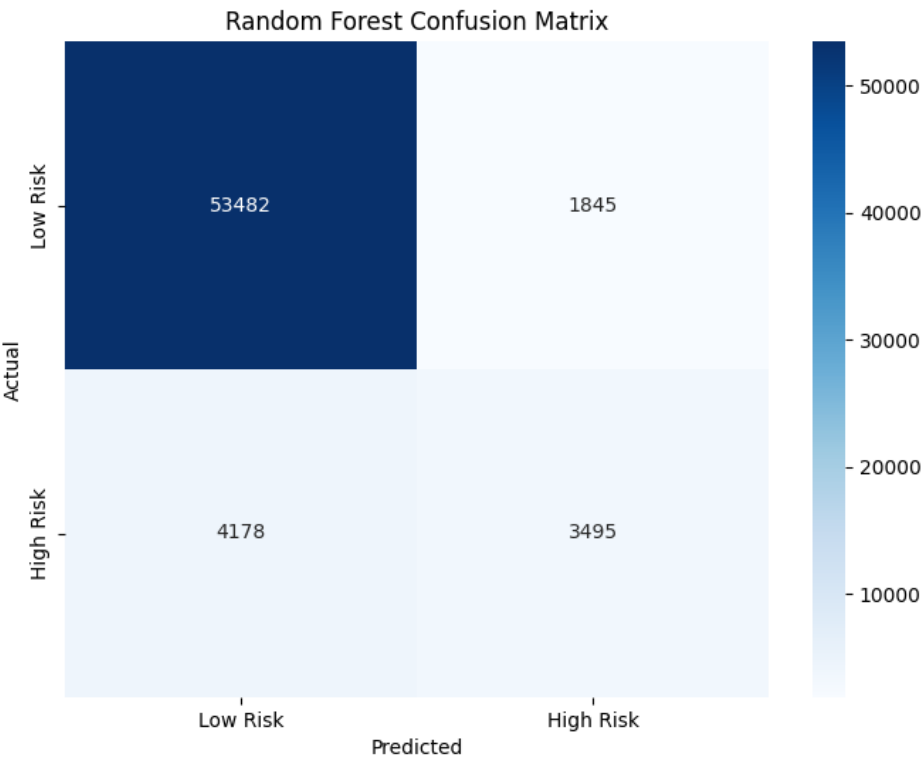
F1 score: 0.5372

ROC AUC Score: 0.7111

Classification Report:

	precision	recall	f1-score	support
0	0.93	0.97	0.95	55327
1	0.65	0.46	0.54	7673
accuracy			0.90	63000
macro avg	0.79	0.71	0.74	63000
weighted avg	0.89	0.90	0.90	63000

Loan Approval Risk Prediction Report



K-Nearest Neighbors:

Accuracy: 0.8905

Precision: 0.5586

Recall: 0.4806

F1 score: 0.5167

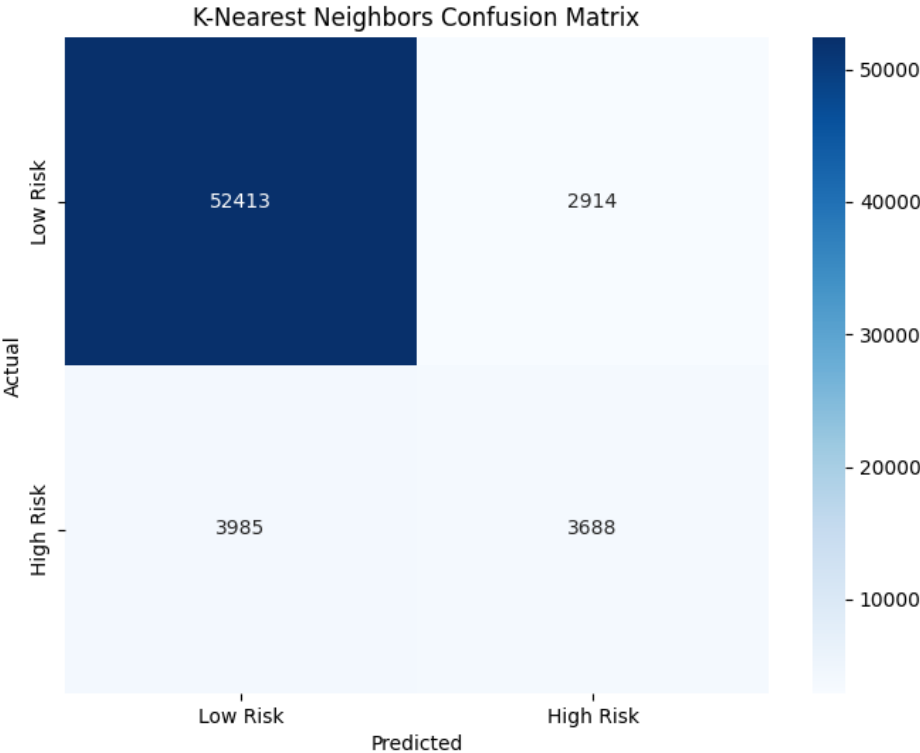
ROC AUC Score: 0.7140

Classification Report:

	precision	recall	f1-score	support
0	0.93	0.95	0.94	55327
1	0.56	0.48	0.52	7673
accuracy			0.89	63000

Loan Approval Risk Prediction Report

macro avg	0.74	0.71	0.73	63000
weighted avg	0.88	0.89	0.89	63000



XGBoost:

Accuracy: 0.9190

Precision: 0.9197

Recall: 0.3673

F1 score: 0.5249

ROC AUC Score: 0.6814

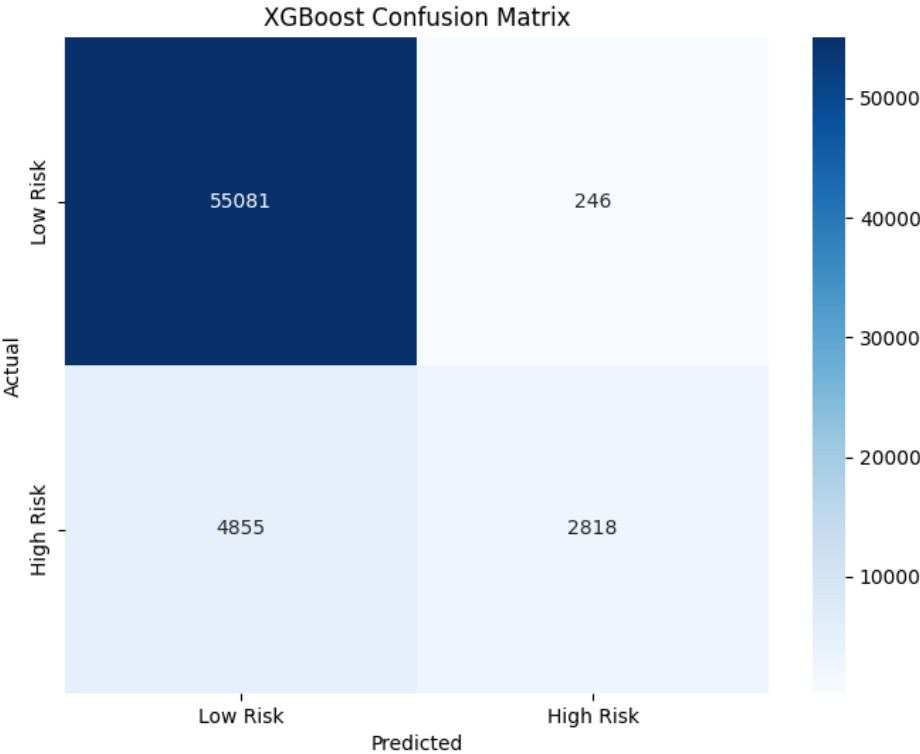
Classification Report:

precision	recall	f1-score	support
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Loan Approval Risk Prediction Report

0	0.92	1.00	0.96	55327
1	0.92	0.37	0.52	7673

accuracy		0.92		63000
macro avg	0.92	0.68	0.74	63000
weighted avg	0.92	0.92	0.90	63000



Loan Approval Risk Prediction Report

Main Deciding Factors Associated with Risk

