Financial Risk Analysis Dashboard

Average Risk Score
0.23
-5.2% from last month

Applications Today
847
+12.3% from last month

High Risk Applications
94
+2.1% from last month

Portfolio Value
$2.4M
+8.7% from last month

Recent Risk Assessments

John Smith
LA-2024-001 • $45,000   Risk: 12%   2 min ago

Sarah Johnson
LA-2024-002 • $120,000   Risk: 78%   8 min ago

Mike Davis
LA-2024-003 • $75,000   Risk: 45%   15 min ago

Emma Wilson
LA-2024-004 • $32,000   Risk: 19%   23 min ago

David Brown
LA-2024-005 • $95,000   Risk: 89%   31 min ago

Model Performance Metrics

Gradient Boosting Active
Accuracy   **94.2%**   ● Stable
Precision 91.8% • Recall 89.5% • F1 90.6%

Random Forest Backup
Accuracy   **92.7%**   ● Stable
Precision 89.3% • Recall 91.2% • F1 90.2%

Logistic Regression Baseline
Accuracy   **88.9%**   ● Stable
Precision 86.7% • Recall 88.1% • F1 87.4%

Loan Risk Assessment

● Loan Application

Full Name

Age

Annual Income

$

Employment Status

Select employment status

Loan Details

Loan Amount

$

Loan Purpose

Select purpose

Term (years)

Select term

Financial Information

Credit Score

Debt-to-Income Ratio (%)

Financial Information

Credit Score

Debt-to-Income Ratio (%)

Total Assets

$

Monthly Debt Payments

$

Additional Information

ZIP Code

📍

Home Ownership

Select ownership status

Assess Risk

Model Analysis & Comparison

Performance Metrics   Model Comparison   Bias Analysis

Gradient Boosting

Production

94.2%

Precision	Recall	F1-Score	AUC-ROC
91.8%	89.5%	90.6%	0.946

⬤ Training Time: 2.3 hours   ▇ Prediction Time: 12ms

Random Forest

Backup

92.7%

Precision	Recall	F1-Score	AUC-ROC
89.3%	91.2%	90.2%	0.928

⬤ Training Time: 45 minutes   ▇ Prediction Time: 8ms

Logistic Regression

Baseline

88.9%

Precision	Recall	F1-Score	AUC-ROC
86.7%	88.1%	87.4%	0.891

Training Time: 5 minutes   Prediction Time: 2ms

Regulatory Compliance Monitor

Last compliance check: 9/19/2025, 2:11:29 PM

Fair Credit Reporting Act (FCRA)   98.2%
Compliant

Adverse action notices sent within 30 days
Credit report accuracy maintained
Consumer dispute resolution process active

Equal Credit Opportunity Act (ECOA)   96.8%
Compliant

No discrimination based on protected classes
Adverse action reasons provided
Bias monitoring systems operational

General Data Protection Regulation (GDPR)   94.5%
Compliant

Right to explanation implemented
Data minimization principles followed
Consent management system active

Model Risk Management (SR 11-7)   97.1%
Compliant

Model validation framework established
Independent model review conducted
Model performance monitoring active

Regulatory Compliance Status

Fair Lending Compliance 98.5%
Model shows no discriminatory bias across protected classes

Model Explainability 95.2%
All predictions include SHAP explanations meeting regulatory requirements

Data Privacy 87.3%
Minor data retention policy updates needed for full compliance

Audit Trail 99.1%
Complete audit logs maintained for all risk assessments

Audit Trail

Model Prediction   info

Risk assessment completed for application LA-2024-001

2024-01-15 14:32:15 • system

Manual Override   warning

Risk score manually adjusted for application LA-2024-002 due to additional collateral

2024-01-15 14:30:22 • john.officer@bank.com

Compliance Check   info

ECOA bias monitoring passed for batch processing

2024-01-15 14:25:10 • system

Data Access   info

Credit bureau data retrieved for customer verification

2024-01-15 14:20:05 • system

Model Update   critical

Gradient Boosting model retrained with new data batch

2024-01-15 14:15:33 • admin@bank.com

Retention Policy

Audit logs are retained for 7 years as required by banking regulations. All system actions and user interactions are logged with cryptographic integrity protection.

Data Governance

Data Quality   96.2%
Missing values < 2%, outliers identified and handled

Data Security   98.7%
Encryption at rest and in transit, access controls active

Data Privacy   94.3%
PII anonymization implemented, consent tracking active

Data Lineage   91.8%
Complete data flow documentation, source tracking enabled