Sample User Documentation

AI Project Charter: AI-Powered Loan Approval System (ALAS)

1. Project Overview

- **Project Name:** AI-Powered Loan Approval System (ALAS)
- **Business Sponsor:** Jessica Thompson, Chief Credit Officer
- **Project Lead:** Mark Patel, Director of Data Science
- **Prepared by:** Emily Chen, AI Project Manager
- **Date:** March 27, 2025
- **Document Version:** 1.0

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2. Business Objectives

- Automate at least 70% of initial loan eligibility decisions by Q1 2026.
- Reduce average loan approval turnaround from 5 business days to 1 business day.
- Improve loan default prediction accuracy from 75% to over 90% by Q2 2026.
- Enhance customer satisfaction ratings related to loan application processing from 3.5/5 to 4.5/5 within 12 months post-deployment.

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3. Project Scope

In Scope:

- Development and deployment of an AI model to assess loan eligibility based on financial, employment, behavioral, and alternative credit data.
- Integration of AI model into existing loan processing workflow.
- Ongoing monitoring of fairness, bias, explainability, and data privacy post-deployment.

Out of Scope:

- Manual approval processes following initial AI decision.
- Development of customer-facing interfaces for loan application submissions.

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4. Key Stakeholders

Role	Name	Responsibility

Project Sponsor	Jessica Thompson	Strategic oversight
Project Lead	Mark Patel	Technical oversight
AI Ethics & Governance Lead	Dr. Anita Roy	AI ethics, fairness auditing
Data Privacy Officer	Rajesh Kumar	Data privacy compliance
Credit Risk Officer	Laura Simmons	Risk assessment validation
IT Infrastructure Lead	Carlos Fernandez	Technical integration
Regulatory Compliance Manager	Angela Diaz	Regulatory compliance

5. Success Metrics

Metric	Current (2025)	Target (2026)
Loan approval automation rate	0%	70%
Loan decision turnaround time	5 days	1 day
Accuracy of loan default predictions	75%	>90%
Customer satisfaction rating (loan process)	3.5/5	4.5/5
Reduction in loan processing cost per loan	$150	<$75

6. Project Timeline

Phase	Start Date	End Date
Planning & Requirements	April 15, 2025	May 31, 2025
Data Collection & Cleaning	June 1, 2025	July 31, 2025
Model Development	August 1, 2025	October 31, 2025
Model Testing & Validation	November 1, 2025	December 15, 2025
Deployment & Integration	January 5, 2026	February 15, 2026
Post-Deployment Monitoring	February 16, 2026	Ongoing

7. Assumptions & Dependencies

- Availability of historical loan application data from Jan 2018 to Dec 2024.
- Integration capabilities with existing loan management software (LoanSoft V7.2).
- Regulatory approval from Financial Conduct Authority (FCA) expected by December 2025.
- Availability of necessary compute infrastructure by July 2025 (AWS cloud).

8. Risks and Mitigation

Risk Description	Likelihood	Impact	Mitigation Strategy
Bias and fairness issues affecting customer segments	High	High	Regular bias audits, human-in-loop oversight
Delay in obtaining regulatory approvals	Medium	High	Engage compliance early; proactive consultation
Data privacy breach due to improper handling of personal data	Medium	High	Implement robust data privacy management processes
Insufficient explainability affecting regulatory compliance	Medium	Medium	Develop model with integrated explainability methods

9. Approval

Approver Name	Title	Signature	Date
Jessica Thompson	Chief Credit Officer	[Signature]	March 30, 2025
Mark Patel	Director of Data Sci.	[Signature]	March 30, 2025

Data Governance and Privacy Plan

AI-Powered Loan Approval System (ALAS)

Document Version: 1.0

Date: March 27, 2025

Prepared by: Rajesh Kumar, Data Privacy Officer

1. Purpose

Outline data governance standards and privacy practices for ALAS, ensuring compliance with regulatory frameworks.

2. Applicable Regulations and Standards

- GDPR (EU General Data Protection Regulation)
- California Consumer Privacy Act (CCPA)
- Gramm-Leach-Bliley Act (GLBA)
- ISO/IEC 27001 Information Security Management

3. Types of Data

Category	Data Examples	Sensitivity Level

Personal Identifiable Information (PII)	Name, SSN, DOB, Address	High
Financial Information	Income, bank statements, credit reports	High
Behavioral Data	Spending habits, online activity	Medium
Alternative Credit Data	Rent payments, utility bills	Medium

4. Data Collection

- Data sourced from customer loan applications, credit bureaus, and alternative data vendors.
- Data collection consent to be obtained explicitly during loan application process.

5. Data Storage and Security

- Storage: AWS Cloud (US-East region), encrypted at rest (AES-256) and in transit (TLS 1.3).
- Access controls: Role-based access, multi-factor authentication (MFA), access audits every quarter.

6. Data Privacy Measures

- Data anonymization/pseudonymization during model training and testing phases.
- Explicit consent management system integrated within customer-facing applications.

7. Data Retention Policy

Data Type	Retention Period	Disposal Method
Loan Application Data	7 years post-decision	Secure digital shredding
Model Training Data	5 years	Anonymization & archive
Customer Support Logs	3 years	Secure digital deletion

8. Data Governance Roles and Responsibilities

Role	Responsibility
Data Privacy Officer	Oversight of privacy compliance, breach response
Data Steward	Data quality, access management, and lifecycle monitoring
Data Engineer	Infrastructure security, data pipeline management

9. Incident Management

- Incident response plan tested semi-annually.

- Maximum acceptable breach response time: 48 hours from detection.
- Breach notification to regulators within 72 hours (GDPR).

10. Audit and Compliance Review

Audit Type	Frequency	Conducted by	Next Review Date
Data privacy compliance audit	Annually	Internal Compliance Team	November 15, 2025
External data security audit	Biennially	External Auditor (PWC)	July 20, 2026

11. Known Gaps and Outstanding Decisions

- Finalize vendor selection for alternative credit data sources.
- Complete data transfer impact assessment for international loan applicants.
- Confirm feasibility of customer data deletion requests related to model training datasets.

12. Approvals

Approver Name	Title	Signature	Approval Date
Rajesh Kumar	Data Privacy Officer	[Signature]	March 29, 2025
Jessica Thompson	Chief Credit Officer	[Signature]	March 29, 2025

Model Development Documentation

AI-Powered Loan Approval System (ALAS)

Document Version: 1.0

Date: March 27, 2025

Prepared by: Mark Patel, Director of Data Science

1. Purpose

Detail the development process, methodologies, and specifications for the loan eligibility predictive model.

2. Model Objective

- Predict likelihood of loan default to automate loan approval decisions.
- Provide explainable reasoning for each prediction for regulatory compliance.

3. Data Overview

- Training data: 500,000 historical loan applications (Jan 2018 - Dec 2024).
- Data sources include internal loan application records, credit bureau data, alternative credit data.
- Training/Validation/Test split: 70% / 15% / 15%.

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4. Model Development Methodology

- **Model Type:** Gradient Boosting Decision Tree (LightGBM / XGBoost candidate evaluation pending).
- **Baseline Model:** Logistic Regression (existing business benchmark).
- **Feature Engineering:**
  - Debt-to-income ratio
  - Credit utilization
  - Historical repayment behavior
  - Behavioral and alternative data (rent, utilities)
- **Hyperparameter Tuning Method:** Bayesian optimization.

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5. Performance Metrics

Metric	Current Benchmark (Logistic Regression)	Target (Gradient Boosting)
ROC-AUC	0.78	≥0.92
Recall (Sensitivity)	0.70	≥0.85
Precision	0.65	≥0.80
F1-score	0.67	≥0.82

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6. Explainability Methods

- SHAP values for global and local interpretability.
- Decision-tree based explanations for individual predictions.
- Integration of explanation interface with existing workflow (LoanSoft V7.2).

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7. Fairness and Bias Evaluation

- Evaluate fairness metrics across demographic segments (gender, ethnicity, age).
- Use Fairlearn toolkit for bias detection (demographic parity, equalized odds).

- Human-in-the-loop review triggered for predictions near threshold.

8. Human-in-the-Loop Integration

- Human review of loan applications with prediction confidence between 45-55%.
- Monthly model review by the risk management team for exceptions and model drift.

9. Model Deployment Plan (Initial Details)

- Deployed via REST API integrated into existing loan processing infrastructure.
- Dockerized containers for scalable deployment.
- Scheduled retraining every 6 months, with continuous monitoring for drift.

10. Outstanding Tasks and Gaps

- Final model selection pending comparative tests (LightGBM vs XGBoost).
- Confirm final set of alternative credit data sources.
- Finalize integration testing plan with LoanSoft software team.
- Establish benchmark for acceptable fairness thresholds.

11. Review and Approval

Approver Name	Title	Signature	Approval Date
Mark Patel	Director of Data Science	[Signature]	March 30, 2025
Laura Simmons	Credit Risk Officer	[Signature]	March 30, 2025

Bias and Fairness Assessment Report

AI-Powered Loan Approval System (ALAS)

Document Version: 1.0

Date: March 27, 2025

Prepared by: Dr. Anita Roy, AI Ethics & Governance Lead

1. Purpose

Assess and document potential bias and fairness risks within the AI loan approval model.

2. Overview of Assessment

- Tool Used: Fairlearn Toolkit
- Date of assessment: March 20–26, 2025
- Data evaluated: 75,000 loan applications (validation dataset, Jan 2023–Dec 2024)

3. Protected Attributes Assessed

- **Gender:** Male, Female, Non-binary
- **Ethnicity:** White, Black, Hispanic, Asian, Other
- **Age Group:** 18–29, 30–44, 45–59, 60+

4. Fairness Metrics Used

- Demographic Parity Difference
- Equal Opportunity Difference
- Equalized Odds Difference

5. Preliminary Fairness Assessment Results

Protected Attribute	Group	Approval Rate (%)	Demographic Parity Diff.	Equal Opportunity Diff.	Equalized Odds Diff.
Gender	Male	62%	-	-	-
	Female	57%	-5%	Pending	Pending
	Non-binary	54%	-8%	Pending	Pending
Ethnicity	White	64%	-	-	-
	Black	52%	-12%	Pending	Pending
	Hispanic	55%	-9%	Pending	Pending
	Asian	61%	-3%	Pending	Pending
Age Group	18–29	58%	-	-	-
	30–44	62%	+4%	Pending	Pending
	45–59	64%	+6%	Pending	Pending
	60+	49%	-9%	Pending	Pending

(*Note:* “Pending” indicates detailed analysis in progress.)

6. Identified Areas of Concern (Preliminary)

- Lower approval rates observed for Black and Hispanic applicants.

- Gender disparities noted; female and non-binary applicants experience slightly lower approval rates.
- Older applicant group (60+) shows significantly lower approval rates.

7. Recommended Mitigation Strategies

- Incorporate demographic parity constraints in model retraining.
- Regular human-in-the-loop audits for marginal loan decisions (45–55% confidence range).
- Investigate alternative feature engineering to reduce proxy biases.

8. Follow-Up Actions

Action Item	Owner	Due Date
Complete detailed Equal Opportunity and Equalized Odds assessments	AI Ethics Team	April 10, 2025
Propose bias-mitigation retraining adjustments	Mark Patel, Director Data Science	April 20, 2025
Human audit pilot on high-risk demographics	Laura Simmons, Credit Risk Officer	May 15, 2025

9. Approval

Approver Name	Title	Signature	Approval Date
Dr. Anita Roy	AI Ethics & Governance Lead	[Signature]	March 29, 2025
Mark Patel	Director of Data Science	[Signature]	March 29, 2025

Human-in-the-Loop Procedures

AI-Powered Loan Approval System (ALAS)

Document Version: 1.0

Date: March 27, 2025

Prepared by: Laura Simmons, Credit Risk Officer

1. Purpose

Define procedures for human oversight within the AI-driven loan approval workflow.

2. Human-in-the-Loop Triggers

- **Confidence Threshold:** Predictions between 45–55% confidence.

- **Fairness Alert:** Applications flagged due to potential demographic bias.
- **Explainability Concern:** Cases with unclear or inconsistent explanations.

3. Workflow Steps

Step 1: AI Decision Review (Daily)

- AI identifies loans requiring human review (confidence/fairness flags).
- System queues these cases to Credit Analysts by 9:00 am daily.

Step 2: Human Assessment (Within 4 Hours)

- Analysts review flagged applications, considering AI explanations and external data.
- Analysts document approval/rejection rationale within LoanSoft V7.2.

Step 3: Decision Escalation (Within Same Business Day)

- Complex cases escalated to senior credit risk managers for additional oversight.

4. Roles and Responsibilities

Role	Responsibility	Response SLA
Credit Analyst	Initial human review, documentation, and action	≤4 hours
Senior Credit Manager	Escalation decisions and approvals	≤8 hours
Data Science Team	Provide clarification for AI outputs if needed	≤24 hours

5. Documentation Requirements

- Decision rationale documented clearly in LoanSoft V7.2 (approval/rejection reasoning).
- Record of human review outcomes for compliance audits (stored minimum 7 years).

6. Monitoring & Audit

- Monthly review of human decisions vs. AI recommendations.
- Quarterly fairness assessment of human-reviewed cases.
- Annual independent audit (next audit: December 2025).

7. Reporting

Report Type	Frequency	Owner	Next Report Due
Human-in-the-loop Activity	Monthly	Laura Simmons	April 30, 2025
Fairness and Bias Human Audit	Quarterly	Dr. Anita Roy	June 30, 2025

8. Open Tasks and Decisions

- Determine criteria for analyst override of AI decisions.
- Finalize training module for analysts on interpreting AI explanations.

9. Approval

Approver Name	Title	Signature	Approval Date
Laura Simmons	Credit Risk Officer	[Signature]	March 29, 2025
Anita Roy	AI Ethics Lead	[Signature]	March 29, 2025

Explainability Report

AI-Powered Loan Approval System (ALAS)

Document Version: 1.0

Date: March 27, 2025

Prepared by: Mark Patel, Director of Data Science

1. Purpose

Evaluate and document the explainability measures and techniques implemented in ALAS to ensure transparency and compliance.

2. Explainability Goals

- Ensure loan approval decisions are transparent, interpretable, and compliant with regulatory requirements (GDPR, GLBA).
- Provide sufficient clarity for end-users (Credit Analysts, Regulators, and Customers).

3. Explainability Techniques Used

- **SHAP (SHapley Additive exPlanations)**: Individual prediction explanations.
- **Global Feature Importance**: Explain model behavior across all predictions.
- **Decision Trees Visualization**: Simplified visual explanations for loan decisions.

4. Sample Explanation Output (Example)

Feature	Impact on Decision	Explanation
Debt-to-income ratio	Negative	High ratio (42%) significantly increased risk.

Recent credit inquiries	Negative	5 inquiries in past 60 days indicates higher risk.
Employment duration	Positive	Employment duration (6 years) decreased risk.
Credit utilization	Neutral	Moderate utilization (28%) had minimal impact.

(*Note:* Example only, based on mock data.)

5. Integration into Workflow

- Explainability module integrated directly into LoanSoft V7.2.
- Credit analysts provided explanations for all loans flagged for review.
- Customers provided simplified rationale upon request.

6. Explainability Performance Metrics (Preliminary)

Metric	Current Performance	Target Performance
Analyst comprehension rating	78%	≥90%
Customer satisfaction (clarity)	Pending	≥85%
Regulatory compliance acceptance	Pending	100%

7. Known Limitations

- Certain behavioral features lack intuitive explanations; additional feature simplification required.
- Model complexity occasionally generates conflicting SHAP values; further tuning needed.

8. Future Explainability Enhancements

- Develop user-friendly dashboards for analysts by July 2025.
- Incorporate counterfactual explanations by December 2025.

9. Open Tasks

- Complete customer satisfaction survey on explanation clarity by June 2025.
- Finalize regulatory feedback on explainability compliance by September 2025.

10. Approval

Approver Name	Title	Signature	Approval Date
Mark Patel	Director of Data Science	[Signature]	March 30, 2025

Anita Roy	AI Ethics & Governance Lead	[Signature]	March 30, 2025

Deployment Plan

AI-Powered Loan Approval System (ALAS)

Document Version: 1.0

Date: March 27, 2025

Prepared by: Carlos Fernandez, IT Infrastructure Lead

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1. Purpose

Outline deployment steps, responsibilities, timelines, and contingencies for releasing ALAS into production.

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2. Deployment Overview

- **Deployment Date:** February 15, 2026
- **Deployment Window:** 12:00 AM – 6:00 AM EST
- **Downtime Window:** Maximum 2 hours (LoanSoft system)

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3. Deployment Environment

- **Platform:** AWS Cloud, Kubernetes Cluster (EKS)
- **Infrastructure:** 4-node cluster, auto-scaling enabled
- **Region:** US-East (N. Virginia)

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4. Deployment Strategy

- **Method:** Blue/Green deployment
- **Rollback:** Instant rollback via previous deployment snapshot (automated)

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5. Detailed Deployment Steps

Step	Activity	Owner	Duration
1	Pre-deployment backup and validation	IT Infra Team	30 min
2	Deploy containerized AI model (Docker image)	DevOps Engineer	45 min
3	API Integration with LoanSoft V7.2	Integration Lead	30 min
4	Validate integration & functional tests	QA Lead	45 min
5	Switch traffic (Blue → Green)	DevOps Engineer	15 min

6	Monitoring post-deployment	IT Infra Team	2 hours
7	Rollback (if necessary)	DevOps Engineer	15 min

6. Rollback Criteria

- System downtime exceeding 30 mins.
- API response time exceeds threshold (>500 ms).
- LoanSoft integration failures exceeding 10%.

7. Contingency Plan

- Immediate rollback to previous stable version (Blue).
- Emergency contact (Integration Lead): Carlos Fernandez, (555)-123-4567.

8. Post-Deployment Validation

Validation Activity	Responsible	Completion Date
Functional testing (live data)	QA Lead	Feb 16, 2026
Fairness & explainability initial checks	AI Ethics Lead	Feb 18, 2026
Human-in-loop workflow verification	Credit Risk Officer	Feb 18, 2026

9. Communication Plan

Audience	Message	Delivery Method	Date
Internal staff	Planned downtime notification	Email	Feb 10, 2026
Customers	Deployment notification	Portal & Email	Feb 12, 2026

10. Outstanding Tasks & Decisions

- Final load-testing validation by Dec 15, 2025.
- Confirm post-deployment monitoring tools selection.

11. Approval

Approver Name	Title	Signature	Approval Date
Carlos Fernandez	IT Infrastructure Lead	[Signature]	March 30, 2025
Mark Patel	Director of Data Science	[Signature]	March 30, 2025

Post-Deployment Monitoring and Audit Plan

AI-Powered Loan Approval System (ALAS)

Document Version: 1.0

Date: March 27, 2025

Prepared by: Angela Diaz, Regulatory Compliance Manager

1. Purpose

Define procedures for continuous monitoring and regular audits post-deployment of ALAS to ensure compliance, fairness, performance, and data privacy.

2. Monitoring Objectives

- Detect and address model drift proactively.
- Ensure ongoing fairness and bias compliance.
- Validate data privacy standards continuously.
- Confirm explainability standards remain intact.

3. Monitoring Schedule

Activity	Frequency	Responsible Party	First Review Date
Model performance tracking	Weekly	Data Science Team	Feb 23, 2026
Fairness & bias metrics review	Monthly	AI Ethics Team	March 15, 2026
Human-in-loop decision audit	Monthly	Credit Risk Officer	March 15, 2026
Data privacy compliance review	Quarterly	Data Privacy Officer	April 20, 2026
Full compliance audit	Annually	Internal Audit Team	Feb 15, 2027

4. Key Metrics Monitored

- **Performance Metrics:**
  - Accuracy, Recall, Precision, ROC-AUC
  - Loan approval turnaround time
  - Human-in-loop override frequency
- **Fairness Metrics:**
  - Demographic parity difference
  - Equal opportunity & equalized odds difference

- **Data Privacy Metrics:**
  - Number and severity of privacy incidents
  - Data access audit trails

5. Audit Procedures

- Annual comprehensive audit conducted internally, covering AI lifecycle (planning, development, deployment, and post-deployment).
- External audit (by PwC) scheduled biennially (next scheduled: July 2026).

6. Incident Response

Incident Type	Action	Owner	SLA
Model drift detected	Retrain and redeploy model	Data Science Team	7 days
Bias/Fairness violation	Human audit & retrain	AI Ethics Team	14 days
Data privacy breach	Incident response and notification procedures	Data Privacy Officer	48 hours

7. Reporting and Documentation

Report Type	Frequency	Prepared by	Audience
Model Performance Report	Monthly	Data Science Team	Credit & Compliance Team
Fairness Audit Summary	Quarterly	AI Ethics Team	Regulatory Compliance
Privacy Compliance Report	Quarterly	Data Privacy Officer	Regulatory Compliance
Comprehensive Audit Report	Annually	Internal Audit	Executive Committee

8. Outstanding Tasks & Decisions

- Select final automated monitoring tool (considering MLflow, SageMaker).
- Approve threshold for acceptable model drift triggering retraining.

9. Approval

Approver Name	Title	Signature	Approval Date
Angela Diaz	Regulatory Compliance Manager	[Signature]	March 30, 2025
Mark Patel	Director of Data Science	[Signature]	March 30, 2025

Risk and Compliance Checklist

AI-Powered Loan Approval System (ALAS)

Document Version: 1.0

Date: March 27, 2025

Prepared by: Angela Diaz, Regulatory Compliance Manager

✅ 1. Regulatory Compliance

- ☐ GDPR Compliance (EU applicants data)
- ☐ Gramm-Leach-Bliley Act (GLBA) adherence
- ☐ Fair Lending Act Compliance Review
- ☐ California Consumer Privacy Act (CCPA) requirements checked
- ☐ Financial Conduct Authority (FCA) approval received

✅ 2. Data Privacy & Security

- ☐ Data encryption (AES-256 at rest, TLS 1.3 in transit) validated
- ☐ Consent management process operational
- ☐ Access control reviewed (RBAC & MFA)
- ☐ Data retention and deletion protocols validated
- ☐ Data breach response tested and documented (last test: [March 5, 2025])

✅ 3. Model Development and Validation

- ☐ Model performance meets accuracy & reliability targets
- ☐ Explainability requirements verified (SHAP, Feature Importance)
- ☐ Bias & fairness metrics assessed (Fairlearn toolkit)
- ☐ Human-in-loop procedures validated and documented
- ☐ Model drift detection mechanisms tested and operational

✅ 4. Deployment and Infrastructure

- ☐ Deployment rollback tested successfully (last test: [Jan 30, 2026])
- ☐ Integration with LoanSoft v7.2 validated
- ☐ Blue/Green deployment strategy tested successfully

- [ ] Infrastructure scaling/load testing completed
- [ ] Emergency contingency plan reviewed and documented

✅ 5. Post-Deployment Monitoring

- [ ] Weekly model monitoring processes established
- [ ] Monthly fairness audit schedule confirmed
- [ ] Quarterly data privacy compliance monitoring scheduled
- [ ] Annual internal compliance audit scheduled ([Feb 2027])
- [ ] Biennial external audit (PwC) confirmed (next: [July 2026])

✅ Outstanding Tasks and Decisions

- [ ] Finalize alternative data vendors compliance checks
- [ ] Complete customer-facing transparency documentation (model explainability)
- [ ] Approve automated monitoring tool selection (MLflow vs. SageMaker)
- [ ] Confirm final thresholds for model retraining and fairness interventions

✅ Approval

Approver Name	Title	Signature	Approval Date
Angela Diaz	Regulatory Compliance Manager	[Signature]	March 30, 2025
Jessica Thompson	Chief Credit Officer	[Signature]	March 30, 2025

Model Validation and Performance Report

AI-Powered Loan Approval System (ALAS)

Document Version: 1.0

Date: March 27, 2025

Prepared by: Mark Patel, Director of Data Science

1. Purpose

Summarize validation and initial performance results of the ALAS predictive model.

2. Validation Overview

- **Validation Period:** Nov 1 – Dec 15, 2025

- **Validation Dataset:** 75,000 loan applications (historical data: Jan–Dec 2024)
- **Validation Method:** Cross-validation (5-fold)

3. Model Performance Metrics

Metric	Baseline (Logistic Regression)	ALAS Model (Gradient Boosting)	Target
Accuracy	76.2%	88.4%	≥90%
ROC-AUC	0.78	0.91	≥0.92
Recall (Sensitivity)	70%	84%	≥85%
Precision	65%	79%	≥80%
F1-score	67%	81%	≥82%

(*Note:* Additional hyperparameter tuning required.)

4. Confusion Matrix (Preliminary)

	Predicted Approved	Predicted Denied
Actual Approved	41,580	4,920
Actual Denied	3,780	24,720

5. Fairness Validation (Summary)

- Demographic parity difference flagged at -12% for ethnicity (Black applicants); remediation underway.
- Gender fairness within acceptable preliminary range; additional checks pending.

6. Explainability Validation (Summary)

- SHAP values and global feature importance passed preliminary compliance checks.
- Explainability comprehension rating by analysts at 78% (below target of ≥90%).

7. Model Drift Assessment

- Drift not assessed yet (requires post-deployment monitoring).

8. Recommendations & Next Steps

- Perform additional hyperparameter tuning (complete by January 15, 2026).
- Conduct additional fairness and bias mitigation (deadline: January 30, 2026).
- Improve explainability interface based on analyst feedback (by February 10, 2026).

9. Outstanding Decisions

- Finalize model hyperparameters post-tuning.
- Complete fairness remediation prior to deployment approval.

10. Approval

Approver Name	Title	Signature	Approval Date
Mark Patel	Director of Data Science	[Signature]	March 30, 2025
Laura Simmons	Credit Risk Officer	[Signature]	March 30, 2025