

AI-Powered Collections Strategy

Leveraging Agentic AI for Scalable, Fair, and
Effective Debt Management at Geldium

Workflow Overview:

1. Customer Data Intake:

- Collect credit score, income, tenure, payment history, credit utilization.

2. Risk Assessment (Decision Logic):

- Use logistic regression to classify risk (Low, Medium, High).

3. Action Triggers:

- Assign interventions based on risk level (reminder, education, outreach).

4. Learning Loop:

- Track repayment outcomes and retrain model monthly.

Top Predictive Attributes:

1. Credit Utilization: Signals financial stress.
2. Credit Score: Reflects past credit behavior.
3. Missed Payments: Strong indicator of risk.
4. Account Tenure: New accounts may lack stability.
5. Debt-to-Income Ratio: Shows repayment capacity.

Risk-Based Rules & AI Actions:

Low Risk:

- Rule: Score > 0.8, no missed payments
- Action: SMS/app reminder

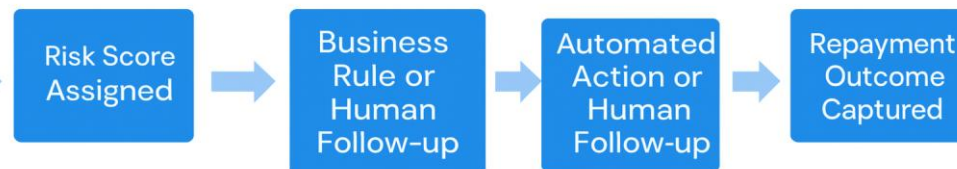
Medium Risk:

- Rule: Score 0.5–0.8, 1–2 missed payments
- Action: Budget tools/payment plan

High Risk:

- Rule: Score < 0.5, 3+ missed or high utilization
- Action: Escalate to collections/hardship plan

Data Flow:



Role of Agentic AI in Financial Collections

Agentic AI can streamline repetitive collection tasks while humans manage ethical, legal, or sensitive actions. This division ensures speed, fairness, and accountability.

Autonomous (AI-Driven)	Human Oversight
Send payment reminders via SMS/email	Approve hardship or restructuring requests
Classify customer risk levels (low, medium, high)	Handle escalations or customer disputes
Trigger follow-up outreach based on risk score	Intervene in flagged edge cases (e.g., life events)
Log repayment outcomes to retrain the model	Conduct fairness and compliance audits
Recommend repayment plans based on customer behavior	Make final call on write-offs or legal actions

Responsible AI Guardrails

- Run regular fairness audits to detect bias across age, gender, and income groups
- Use interpretable models (e.g., logistic regression) to ensure explainable outcomes
- Include human-in-the-loop for sensitive decisions involving financial hardship
- Comply with regulations like ECOA, GDPR, and local financial policies

Expected Business Impact

Business KPIs:

- 15% reduction in delinquency among high-risk customers
- 20% reduction in manual workload via automation
- Increased repayment rate due to timely, tailored outreach
- Lower cost per customer through digital self-service

Customer Outcomes:

- Faster, more personalized support
- Higher transparency in credit decisioning
- Reduced stress through early intervention
- Improved trust in the lending process