



AI-Powered Collections Strategy



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



How the System Works

- **Inputs:** Customer profile, financial indicators, payment history
- **Decision Logic:** Predict delinquency risk → assign risk tier (Low, Medium, High)
- **Actions:**
 - Low: Monitor only
 - Medium: Offer financial tools
 - High: Proactive outreach + support plan
- **Learning:** Track outcomes → retrain model → refine rule

Key Predictors & Risk-Based Actions

- **Top Attributes:**
 - Credit Utilization  – signals financial stress
 - Missed Payments  – strong delinquency marker
 - DTI Ratio  – shows debt pressure
 - Age  – younger = higher early risk
 - Account Tenure  – longer = more stable
- **Risk Responses:**

| | | |
|--------|-----------------------------------|-----------------------------|
| Low | Clean record | No |
| Medium | 1 missed payment + moderate score | Offer budget tools |
| High | 2+ missed payments + high DTI | Outreach + tailored support |

Role of Agentic AI

Agentic AI in Collections: How It Works

- Automates low-risk and repetitive actions like reminders and monitoring
- Delegates sensitive or high-impact decisions (e.g., legal escalation) to human agents
- Learns continuously from outcomes to refine its suggestions
- Collaborates with people via dashboards, alerts, or recommendations before executing nuanced actions

Examples of Collection Actions

| Action | Automation Suitability | Reason |
|-----------------------------------|-----------------------------|---|
| Payment Reminder SMS/Email | Full Automation | Low-stakes, templated messaging—ideal for AI scheduling & sending |
| Flagging High-Risk Accounts | Full Automation | Model can detect patterns (e.g., missed payments + high DTI) accurately |
| Offering Standard Repayment Plans | Human Oversight Recommended | Needs human review to tailor support and ensure fairness |
| Escalating to Legal Collection | Human Oversight Needed | Complex, high-impact decision requiring human judgment |
| Debt Restructuring Negotiation | Human Oversight Essential | Requires empathy, negotiation skills, and personalized financial advice |

Responsible AI Guardrails

Key Practices

- **Fairness**
 - Regular bias testing across age, gender, income groups
 - Use balanced datasets and stratified validation
 - Avoid discriminatory proxies in feature selection
- **Transparency**
 - Choose interpretable models (e.g., logistic regression or decision trees)
 - Generate explainable outputs (e.g., SHAP values, feature importance)
 - Provide accessible documentation to stakeholders and regulators
- **Compliance**
 - Align with local and global data protection laws (e.g., GDPR, DPDP Bill)
 - Secure storage and use of customer data with encryption and audit trails
 - Obtain consent for automated decision-making where required

Monitoring & Auditing Recommendation

| Practice | What to Monitor | Frequency |
|-------------------------|--|---------------------------|
| Bias Audit | Performance across customer segments (e.g., age, income) | Quarterly |
| Model Drift Detection | Accuracy and predicted probabilities over time | Monthly |
| Action Outcome Tracking | Responses to outreach actions (e.g., repayment rates) | Ongoing |
| Compliance Checks | Data use, consent records, rule adherence | Semi-annually |
| Human Review Logs | Review override decisions for accountability | Real-time & monthly audit |

Expected Business Impact

Key KPIs: Balancing Outcomes & Fairness

| KPI | What It Measures | Why It Matters |
|-------------------------------------|--|---------------------------------------|
| Delinquency Reduction Rate | % decrease in past-due accounts | Tracks business impact |
| Customer Engagement Rate | Response to outreach (SMS, email) | Gauges effectiveness of interventions |
| Resolution Time | Avg. time to resolve delinquency | Indicates operational efficiency |
| Fairness Index | Disparity in predictions/actions across segments | Ensures equitable treatment |
| Human Review Escalation Rate | % of cases flagged for manual oversight | Balances automation with judgment |

How Agentic AI Improves Efficiency & Experience

- **Smart Prioritization** : AI can rank accounts by risk level in real time—letting teams focus on urgent cases first, saving time and reducing delinquency faster.
- **Personalized Outreach** : Customers receive targeted support (e.g. budgeting tips, tailored repayment offers), improving trust and increasing response rates.
- **Continuous Learning** : The system adapts based on outcomes—refining its decisions and reducing false flags, which helps both staff and customers

Final Takeaways

- **AI + Human Oversight** = Smarter, fairer collections
- **Predictive Insights** guide risk-driven support—not punishment
- **Responsible Design** ensures transparency, equity, and compliance
- **Continuous Learning Loop** keeps improving outcomes over time

END

Thanks,

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