Business Summary Report: Predictive Insights for Collections Strategy

1.Summary of Predictive Insights

Our predictive model and EDA identified key drivers and customer segments most at risk of delinquency:

* **Top 3 Risk Factors**
  + **High Credit Utilization (>80%)** — Strongly associated with higher delinquency risk. Customers with very high utilization struggle to manage debt.
  + **History of Missed Payments** — Past payment delinquencies are a significant predictor of future default.
  + **Low Income Bracket (<₹25,000/month)** — Customers in this segment showed higher delinquency rates, possibly due to lower capacity to repay during financial stress.

| **Key Insight** | **Customer Segment** | **Influencing Variables** | **Potential Impact** |
| --- | --- | --- | --- |
| High credit utilization predicts delinquency | Customers with >80% credit utilization | Credit utilization, payment history | Prioritize these customers for proactive engagement and tailored repayment plans |
| Past missed payments predict future delinquency | Customers with ≥1 missed payment in last 12 months | Missed payments, income level | Enable early interventions for these accounts |
| Low-income customers face higher risk | Customers earning <₹25,000/month | Income, credit utilization | Design affordability-based repayment options |

2. Recommendation Framework

**Restated Insight:**  
High credit utilization increases the likelihood of customer delinquency.

**Proposed Recommendation:**  
Implement a targeted communication and repayment program for customers whose credit utilization exceeds 80%.

* **Specific:**  
  Launch a credit counseling and repayment plan program focused on customers with >80% utilization.
* **Measurable:**  
  Aim to reduce delinquency rates in this segment by **15% within 6 months**.
* **Actionable:**  
  Send personalized SMS/emails and offer repayment restructuring or counseling via phone.
* **Relevant:**  
  Aligns with Geldium’s goal to proactively reduce delinquency while supporting customer financial health.
* **Time-bound:**  
  Roll out program within **30 days**, monitor progress monthly, and review impact after 6 months.

**Justification and Business Rationale:**  
This recommendation directly addresses a key predictor of delinquency. By helping customers reduce their utilization, we can lower default risk and improve repayment rates while strengthening customer relationships.

Ethical and Responsible AI Considerations

* **Fairness Risks & Mitigations**
  + *Risk:* The model may disproportionately flag low-income customers, potentially leading to over-targeting vulnerable groups.
  + *Mitigation:* Combine model outputs with human review; ensure repayment plans are supportive, not punitive.
  + *Risk:* Historical bias in missed payments data could reinforce disadvantages for certain groups.
  + *Mitigation:* Regularly audit model predictions for bias using fairness metrics (e.g., demographic parity).
* **Transparency & Explainability**
  + Use simple explanations like: “Your risk level is based on high credit usage and payment history.” Ensure customers and non-technical staff understand model outputs.
* **Responsible AI Principles**
  + Our approach promotes *transparency*, *fair treatment*, and *accountability* by combining AI with human judgment and monitoring outcomes for unintended effects.