Business Summary Report: Predictive Insights for Collections Strategy

# 1. Summary of Predictive Insights

 Customers with **4 or more missed payments** in the past 12 months are significantly more likely to become delinquent.

 **Credit utilization above 80%** is a strong risk indicator, showing that customers may be over-leveraged or financially stressed.

 **Low credit scores (under 500)**, especially when combined with high **debt-to-income ratios**, signal elevated delinquency risk.

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| Key Insight | Customer Segment | Influencing Variables | Potential Impact |
| High credit utilization increases risk of delinquency | Customers with credit utilization >80% | Credit\_Utilization, Credit\_Score, Missed\_Payments, Debt\_to\_Income\_Ratio | Launch targeted interventions to offer early repayment plans or credit counseling |

# 2. Recommendation Framework

**Restated Insight:**  
High credit utilization (above 80%) increases the risk of delinquency significantly.

**Proposed Recommendation:**

* **Specific:** Launch a proactive alert system for customers exceeding 80% credit utilization.
* **Measurable:** Reduce delinquency rate among this group by 15% within the next 6 months.
* **Actionable:** Send automated financial wellness tips and offer payment plan options.
* **Relevant:** Targets high-risk group identified by the model, aligning with Geldium’s risk mitigation strategy.
* **Time-bound:** Pilot the program for 6 months and assess impact quarterly.

**Justification and Business Rationale:**  
This recommendation directly addresses one of the strongest predictors of delinquency. It’s proactive, scalable, and focused on early support rather than reactive penalties—helping customers and reducing risk to Geldium’s portfolio.

# 3. Ethical and Responsible AI Considerations

 **Fairness Risk 1:** Customers from lower-income regions may be overrepresented in high-risk segments.  
*Mitigation:* Monitor and audit model outputs by geography to avoid disproportionate targeting.

 **Fairness Risk 2:** Self-employed individuals may have variable income and appear riskier.  
*Mitigation:* Evaluate subgroup model performance and adjust feature weighting as needed.

 **Explainability:** Use SHAP (SHapley Additive exPlanations) to interpret predictions for both business users and impacted customers.

 **Responsible Use:** The recommendation promotes customer financial health and aligns with ethical standards of transparency, accountability, and fairness in lending decisions.