**Business Summary Report: Predictive Insights for Collections Strategy**

**1.Summary of Predictive Insights**

The combined analysis of exploratory data assessment and predictive modeling revealed several critical behavioral patterns among customers:

* **Customers below 30 years of age** who have **two or more missed payments** and maintain **credit utilization above 50%** exhibit a significantly higher probability of delinquency.
* A **high debt-to-income ratio (greater than 0.5)** shows a consistent and strong association with delayed or missed payments, indicating potential over-leverage.
* **New customers** with an **account tenure of less than 12 months** generally demonstrate weaker repayment discipline, suggesting limited credit experience or instability in financial behavior.

These findings highlight the need for proactive monitoring and targeted engagement strategies, particularly among high-risk customer groups identified through the analysis.

**Key Insights Summary**

**Key Insight Customer Segment Influencing Variables Potential Impact**

Customers with Under 30 years old, Missed Payments, Targeted

high credit 2+ missed payments, Credit Utilization, Age, engagement and

utilization and credit utilization > 50% Debt-to-Income Ratio. credit management

frequent missed initiatives could payments are at reduce 30-day

highest risk of delinquency rates by

delinquency. more than 10%

within this segment.

**2.Recommendation Framework**

Restated Insight

Customers below the age of 30 who have **two or more missed payments** and maintain **credit utilization above 50%** represent a **high-risk segment** with a strong likelihood of delinquency.

Proposed Recommendation

Implement a six-week SMS engagement campaign targeting these high-risk customers to achieve a minimum 10% reduction in 30-day delinquency rates.

**Specific:** Focus on customers under 30 years old with two or more missed payments and high credit utilization levels (>50%).  
**Measurable:** Monitor delinquency trends during and after the campaign; success will be defined by at least a 10% decline in 30-day delinquency.  
**Actionable:** Leverage Geldium’s existing SMS communication platform to deliver personalized reminders and repayment support messages.  
**Relevant:** Supports Geldium’s strategic objective to reduce delinquency rates and strengthen overall repayment behavior.  
**Time-Bound:** The campaign will be executed over a six-week period with performance tracking throughout the duration.

**Justification and Business Rationale**

This initiative offers a data-driven, cost-efficient, and scalable approach to mitigate delinquency. By concentrating on a clearly defined high-risk group, Geldium can deliver timely interventions that encourage better repayment habits. The campaign not only contributes to financial risk reduction but also enhances customer engagement and reinforces responsible borrowing behavior.

**3.Ethical and Responsible AI Considerations**

 **Potential Bias:** Historical data may skew results for certain groups (e.g., by income or location). Regular fairness checks are required.

 **Explainability:** Logistic regression provides clear, interpretable coefficients, making risk assessment easy to communicate.

 **Responsible Decision-Making:** Human review precedes any action; the SMS campaign is supportive, not punitive.

 **Ethical Principles:** Transparency is maintained, privacy ensured with anonymized data, and ongoing monitoring adapts the model to changing behavior.