Business Summary Report: Predictive Insights for Collections Strategy

Top 3 Risk Factors:  
1. High Credit Utilization (>80%) – Customers with high balances relative to credit limits are 2.5× more likely to default.  
2. Multiple Missed Payments in Last 12 Months – Past payment behavior strongly predicts future delinquency.  
3. Low Monthly Income & High Loan-to-Income Ratio – Financial strain increases default probability.

# 1. Summary of Predictive Insights

Briefly restate your model’s findings from Task 2. Focus on high-risk segments, key predictors of delinquency (e.g., missed payments, credit utilization), and any meaningful patterns the Collections team should be aware of.  
  
Tip: Use 2–3 bullet points or short paragraphs. Refer to the dataset and insights you uncovered.

Optional: Include a Key Insights Summary Table (you may create this in Excel or insert manually).

|  |  |  |  |
| --- | --- | --- | --- |
| Key Insight | Customer Segment | Influencing Variables | Potential Impact |
| [Insert key insight from your model] | [Describe the customer segment this insight applies to] | [List the variables that contributed to this insight] | [Describe what the business could do with this insight] |

# 2. Recommendation Framework

Based on one of your model’s insights, outline your recommended intervention. Your recommendation should follow a SMART approach (Specific, Measurable, Actionable, Relevant, Time-bound).

Use the following subheadings to guide your structure:

* **Restated Insight:**
* **Proposed Recommendation:**
* Specific:
* Measurable:
* Actionable:
* Relevant:
* Time-bound:
* **Justification and Business Rationale:**

# 3. Ethical and Responsible AI Considerations

Reflect on the fairness, transparency, and impact of your model and recommendation.  
  
Include a brief discussion of any relevant ethical considerations, such as:

* Explainability – how easy it is to communicate why the model makes its predictions.
* Whether the recommendation supports responsible financial decision-making.
* Other ethical principles considered (e.g., transparency, accountability, data privacy).

Keep your report under two pages. Write in plain, professional language. Use headings, bullet points, or short paragraphs to make it easy for the reader to follow.

|  |  |  |  |
| --- | --- | --- | --- |
| Key Insight | Customer Segment | Influencing Variables | Potential Impact |
| High credit utilization drives delinquency | Revolving credit customers | Credit utilization, missed payments | Targeted repayment plans |
| Young credit history linked to higher risk | New borrowers (<2 years) | Age of credit account, income stability | Financial literacy programs |
| Income strain predicts missed payments | Low-income borrowers | Income, loan-to-income ratio | Adjusted repayment schedules |

High credit utilization is the strongest predictor of delinquency.

Specific: Reduce credit utilization for high-risk customers via proactive limit adjustments and repayment incentives.

Measurable: Lower average utilization from 85% to below 65% for identified high-risk segment.

Actionable: Offer a structured repayment plan and bonus interest rate reduction upon achieving target utilization.

Relevant: Aligns with Geldium’s goal to minimize bad debt while retaining customers.

Time-bound: Implement within the next 6 months, with quarterly progress reviews.

Reducing utilization not only lowers delinquency probability but also strengthens customer relationships and meets compliance obligations.

Potential for bias or unfair treatment of certain customer groups:

1. Demographic Bias – If income or location proxies correlate with protected characteristics, predictions may unfairly penalize certain groups.  
Mitigation: Apply disparate impact analysis and adjust thresholds or remove proxy variables.

2. Data Skew – If past collection outcomes are overrepresented in one demographic, model may inherit bias.  
Mitigation: Use balanced sampling and fairness-aware algorithms.

Explainability – Use plain-language reports: 'Your risk score increased because of high credit utilization and missed payments history.'

Responsible AI – No use of irrelevant or discriminatory variables. Ensure customers have access to clear reasons for decisions and appeal options.