

Collections Strategy Insight Report

1. Summary of Predictive Insights

Using correlation study, descriptive statistics of the delinquent accounts and other preliminary analysis, the following initial findings for customer segmentation and financial indicators for the risk detection are presented by the model:

- **High-Risk Segmentation for Collections Focus:** Unemployed Employment_Status should be the center of the Collections team's attention, as it is the most common status in the delinquent accounts. Additionally, Business Credit_Card_Type is a category that is most commonly associated with the risk.
- **Key predictors:** The strongest though still weak positive linear relationship to delinquency was in Income in particular approx 0.044 and Credit_Score in particular approx 0.035. Other foundational credit metrics like Credit_Utilization and Debt_to_Income_Ratio were positively linked at a level lower which means worsening credit profile and increased debt generally mean more risk.
- **Actionable Payment Pattern:** Although, the specific sample showed an unexpected negative correlation between the total count of Missed_Payments and Total_Late_Missed payments over six months, universally, payment patterns over a recent period are the most direct predictor of future default. Therefore, the Collections team should use the data for Month_1 through Month_6 to flag customers with a recent negative trend of 'Late' or 'Missed' status, regardless of the overall correlation score.

2. Recommendation Framework

This intervention will be based on the insight that Employment Status is a critical factor and will specifically target the high-risk "Unemployed" segment

Restated Insight: Unemployed is the customer profile with the highest frequency in being marked as delinquent, pointing out that not having current employment income is highly related to credit risk. This is a critical segment to help reduce overall portfolio risk.

Proposed Recommendation: Proactive Financial Coaching Outreach Program for the Unemployed Segment

1. Specific: Initiate a Proactive Financial Stability Outreach Program by automatically enrolling all current and newly identified customers categorized with an Employment_Status of 'Unemployed' who have shown at least one 'Late' payment in the last three months based on Month_4, Month_5, or Month_6. The program includes a mandatory, low-touch contact (SMS/email) followed by an optional, subsidized one-on-one session with a certified financial coach regarding budget planning and job-seeking resources.

2. Measurable: The effectiveness of the program will be assessed based on two key metrics over a period of 120 days.

- Primary Metric: Reduce by 15% the 90-day delinquency rate (where Delinquent_Account = 1) within the target 'Unemployed' cohort by 15%.
- Secondary Metric: Increase by 20% the number of customers in the cohort who maintain an 'On-time' payment status for three consecutive months by 20%.

3. Actionable:

- **System Trigger:** The system will be changed to highlight those customers who meet the criteria.
- **Automated Communication:** Initial automated SMS/e-mail offer the free coaching session within 7 days of being flagged.
- **Collections Handoff:** This prioritized list of customers is then provided to the Collections team that makes soft, non-aggressive follow-up calls to such customers, which are centered around providing resources and do not entail pressuring for debt collection.

4. Relevant: The intervention directly addresses the most frequent high-risk segment that emerged from the data: Employment_Status = Unemployed. Geldium reduces financial losses due to delinquency and offers ethical support by helping with resources rather than purely using collection pressure; this builds customer loyalty and maintains a good brand reputation.

5. Time-bound: The pilot program starts on January 1st and will run a three-month trial; the first full performance review is to be completed by April 30th, comparing the performance of the target cohort against a non-contact control group, which is established on the same date.

Justification and Business Rationale: The rationale is to shift from a reactive collection strategy to a proactive risk prevention strategy. Given that unemployment is a structural reason for default, chasing debt often proves futile. In investing in financial stability resources, Geldium addresses the root cause of delinquency. This minimizes the expensive process of debt write-offs and collections activities, while fostering long-term customer relationships. If the pilot reduces delinquency by the target 15%, the cost savings from reduced loan losses will greatly outweigh the investment in the coaching subsidies.

3. Ethical and Responsible AI Considerations

The logistic regression model gives importance to transparency for regulatory compliance and fairness evaluation. The Unemployed intervention is impactful, as it shifts from punitive collection to proactive support, promoting fairness by way of root cause mitigation for risk and ethical lending practices.