Product Case & Analytics

Problem Statement:

Strengthen Credit Risk Profiling to Reduce Defaults

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Agenda:

1. Company Overview
2. Competitors and Business Model
3. Problem Statement - End Goal
4. Current State Analysis
5. The JAR Advantage: Our Unique Data
6. Proposed Solution: The Enhanced Risk Framework
7. Expected Impact & Success Metrics
8. Project Roadmap & Next Steps

Note: Tools I used to solve this Problem

- Gemini Pro - Presentation Outline
- Perplexity Pro: Company Research
- Google Slides: presentation
- Napkin AI: for Visualization
- Company Official Website for Information

Adopted AI to Enhance the work, Productivity, Leverage with AI capabilities

Overview

JAR is a Bengaluru-based fintech startup founded in 2021 by Misbah Ashraf and Nishchay AG. The company's core business is an automated savings and investment app that rounds up spare change from a user's online transactions and invests it in digital gold. This "micro-savings" model is inspired by the traditional Indian concept of a "piggy bank" and aims to help users, particularly millennials and Gen Z, build a habit of saving.

Key Features:

- **Automated Savings**
- **Digital Gold Investment**
- **Flexible Investments**
- **Withdrawal**
- **Additional Financial Products**

Business Model:

- **Revenue Generation:** JAR primarily earns a commission from its gold service providers for each investment made by users. They also earn referral fees through partnerships with financial institutions and potentially through premium features or data analytics services.
- **Funding:** The company has raised significant funding, including multiple rounds from notable investors such as Tiger Global Management and Sequoia Capital.

Competitors

Goldmoney

SAFEGOLD

eSwarna

~16% p.a.

Problem statement Context

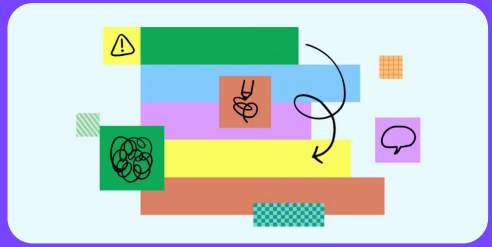
- Given your role as a Product Manager & Analytics at JAR app, your task is to "Strengthen Credit Risk Profiling to Reduce Defaults."

- This means you will likely be focusing on the personal loan product offered by the app. Your work will involve analyzing user data and behavior to create a more robust credit risk model, which can help in better assessing who to give loans to, thereby reducing the number of defaults.

- The company's large user base and existing financial data from user saving habits provide a rich dataset for this analysis.

The Goal:
To reduce the loan default rate by a target of 20-25% over the next two quarters by developing and implementing an enhanced, data-driven credit risk framework.

How to come up with problem statement



Current State Analysis

- **Overview of Existing Model:**
  - Currently relies on traditional data points (e.g., credit score from bureaus, basic demographic information, stated income).
- **Performance Metrics:**
  - **Default Rate:** 6.5%
  - **Approval Rate:** 45%
  - **Key Finding:** A significant portion of defaults are coming from users who have good traditional credit scores but exhibit risky financial behavior within the JAR app.

The JAR Advantage: Our Unique Data Asset

- We are not a traditional lender; we have a deep, behavioral understanding of our users' financial lives.
- **Rich Internal Data:**
  - **Savings Behavior:** Frequency of savings, average investment amount, consistency, response to market dips (panic selling vs. holding).
  - **Spending Habits:** Analysis of transaction data (with user consent) to understand spending categories, velocity, and discretionary vs. non-discretionary spending.
  - **App Engagement:** Session frequency, features used, response to in-app nudges and financial literacy content.
- **Hypothesis:** Users with consistent, disciplined saving habits on JAR, even with a lower traditional credit score, are likely to be more responsible borrowers.

Proposed Solution: The Enhanced Credit Risk Framework

- A multi-layered approach that combines traditional data with our proprietary behavioral data.
- **Phase 1: Feature Engineering**
  - Develop new, predictive features from JAR's internal data:
    - **Savings Consistency Score:** A score based on the regularity and discipline of a user's savings.
    - **Financial Volatility Index:** Measures erratic spending or saving patterns.
    - **Goal Achievement Ratio:** Tracks user progress against their stated savings goals.
- **Phase 2: Advanced Modeling**
  - Move from a simple scorecard to a **machine learning model** (e.g., Gradient Boosting or a Neural Network).
  - This model will be trained on both traditional and our new behavioral data to more accurately predict the probability of default.

Implementation & A/B Testing

- **Strategy:** We will run the new model in "shadow mode" for one month to validate its predictions against the current model without affecting live decisions.
- **A/B Test Plan:**
  - **Control Group (50%):** Users assessed with the current credit risk model.
  - **Test Group (50%):** Users assessed with the new, enhanced model.
- **Objective:** To prove that the new model results in a lower default rate without significantly harming the approval rate for qualified borrowers.

Expected Impact & Success Metrics

- **Primary Metric:**
  - **Reduction in Default Rate:** Target a **20-25%** reduction.
- **Secondary Metrics (KPIs):**
  - **Loan Portfolio Quality:** Monitor the percentage of the portfolio in different risk tiers.
  - **Approval Rate:** Ensure we are not overly restrictive and are still serving our target audience.
  - **Profitability:** Measure the net impact on the portfolio's bottom line.
- **Business Impact:** A more resilient and profitable lending business that can sustainably offer credit to a wider range of deserving users.

Project Roadmap & Resource Allocation

- **Q3 2025: Development & Shadow Mode**
  - **Weeks 1-4:** Data Engineering & Feature Creation (Data Science, Engineering).
  - **Weeks 5-8:** Model Development & Training (Data Science).
  - **Weeks 9-12:** Shadow Mode Deployment & Validation (Engineering, Analytics).
- **Q4 2025: A/B Testing & Rollout**
  - **Weeks 13-20:** Live A/B Testing (Product, Analytics).
  - **Weeks 21-24:** Analysis of Results & Full Rollout Decision (Leadership, Product).
- **Resources Needed:**
  - **Team:** 1 Product Manager, 2 Data Scientists, 2 Engineers (Backend), 1 Analyst.
  - **Tools:** Access to production data, model development environment.

Project Timeline: Development to Rollout

Q3 2025, Weeks 1-4

Data Engineering & Feature Creation

Q3 2025, Weeks 5-8

Model Development & Training

Q3 2025, Weeks 9-12

Shadow Mode Deployment & Validation

Q4 2025, Weeks 13-20

Live A/B Testing

Q4 2025, Weeks 21-24

Analysis of Results & Full Rollout Decision

Summary & Next Steps

- **Summary:** By integrating our unique behavioral data into an advanced machine learning model, we can significantly improve our ability to predict credit risk, leading to lower defaults and a healthier loan book.
- **Next Steps:**
  - Secure approval for the proposed roadmap and resource allocation.
  - Kick-off the project with the data and engineering teams.
  - Provide a bi-weekly progress report to stakeholders.

Thank you

Q&A

Do You Invest in GOLD?

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