Business Problem Statement Template

Project Title: Home Credit Kaggle Competition

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1. Business Problem

- **Description**: This business problem that is being addressed is how to credit check and qualify a candidate for a loan with minimal or no credit history. Currently, there is no mechanism for people who haven't had the time or opportunity to build credit with the use of credit card. However, Home Credit is trying to find a way for these underrepresented lost population of members of the economy to be counted, while also protecting themselves from too risky loans.
- **Impact Analysis**: The impact of this analysis is very large. Finding good candidates can not only help the company but the customers as well. As far as the company is concerned, it will allow them to stay afloat without having to risk defaults. Defaults would be a curse because there would be no way for the company to recoup their investments. On the customer side, they have confirmation that their loaned money will be in good hands. They know that the company is going to stay financially solvent so they do not have to deal with higher interest rates and sub-standard creditors.

2. Analytics Approach

- **Analytic Problem Framing**: The primary analytical challenge is to develop a reliable model that accurately predicts loan repayment probabilities for individuals with limited or no credit history. The goal is to ensure that potential responsible borrowers are not unfairly denied loans and that the loan terms are structured to support their financial success.
- **Proposed Approach**:
    - **Data Preparation**: Combine and clean various datasets, including loan application records, credit bureau data, and repayment histories, focusing on integrating alternative data like telecom and transactional information.
    - **Exploratory Analysis**: Conduct basic analysis such as summary tables, descriptive statistics, and visualizations to understand data patterns and identify key factors that might influence loan repayment.
    - **Model Development**: Use straightforward statistical and machine learning methods (like logistic regression or decision trees) to build a predictive model for loan repayment.
    - **Implementation Strategy**: Plan to integrate the predictive model into Home Credit's existing loan evaluation process, with a focus on practicality and ease of use.

3. Benefit of a Solution

- **Business Value**: Solving this problem will enhance operational efficiency and reduce processing costs. It will also expand the customer base and increase revenue by accurately identifying creditworthy borrowers. Additionally, it will improve customer satisfaction and bolster the company's reputation in the market.
- **Strategic Alignment**: Solving this problem aligns with the broader business strategy by enhancing risk management and expanding market reach. It supports the objective of inclusive finance, granting access to underserved demographics, thus reinforcing the company's commitment to social responsibility. This alignment not only strengthens the company's competitive edge but also solidifies its reputation as a leader in ethical and inclusive financial practices.
- **4. Success Metrics**
    - **Key Performance Indicators (KPIs)**: In order to determine the success of this model, AUC will be used to determine the quality of the model developed.

5. Scope

- **Deliverables**: The project will deliver a predictive analytics model, a comprehensive report detailing insights and analyses, and actionable recommendations for loan approval processes.
- **Boundaries**: The scope includes data analysis and model development, but excludes implementation of the model into existing IT systems and post-deployment monitoring.
- **Timeline:** The project is estimated to span 10 weeks, with key milestones including data preparation (Week 1-2), model development (Week 3-6), and analysis and reporting (Week 7-10).