OUI

**Project Title: Digital Card Sales Optimization**

**Objective:**

To enhance the acquisition of new credit card customers through a data-driven approach by analyzing customer behavior and optimizing the digital sales strategy.

**Key Steps:**

Data Exploration:

Explore the dataset to understand its structure, summary statistics, and any initial patterns.

Data Cleaning:

Handle missing values, if any, and address any inconsistencies in the dataset.

Exploratory Data Analysis (EDA):

Conduct EDA to gain insights into customer demographics, card usage, and other relevant factors.

Visualize key metrics such as customer age distribution, income distribution, and card usage patterns.

Customer Segmentation:

Utilize clustering algorithms to segment customers based on behavior and demographics.

Analyze characteristics of each segment and identify potential target groups for marketing.

Churn Analysis:

Explore the "Attrition\_Flag" column to analyze customer churn.

Identify factors contributing to churn and propose strategies to mitigate churn.

Feature Engineering:

Create new features that might enhance the predictive power of the model.

Consider transforming categorical variables and scaling numerical features.

Predictive Modeling:

Build a predictive model to forecast customer churn or the likelihood of a customer acquiring a new credit card.

Evaluate model performance using appropriate metrics such as accuracy, precision, recall, and F1 score.

Optimization Recommendations:

Generate actionable insights and optimization recommendations based on the analysis.

Propose adjustments to the digital sales strategy, such as personalized offers, targeted marketing campaigns, or website layout changes.

A/B Testing:

Implement A/B testing to validate the effectiveness of proposed changes.

Compare the performance of the current strategy with the optimized strategy using key performance indicators.

Implementation Plan:

Develop a roadmap for implementing the recommended changes.

Collaborate with relevant teams to execute the strategy adjustments.

Monitoring and Iteration:

Establish a system for continuous monitoring of key metrics.

Iterate on the strategy based on ongoing data analysis and feedback.

Deliverables:

Data Exploration Report:

Summary of the dataset structure and initial observations.

Cleaned Dataset:

Dataset with missing values handled and inconsistencies addressed.

EDA Report:

Insights and visualizations from exploratory data analysis.

Customer Segmentation Analysis:

Segmentation results and actionable insights.

Churn Analysis Report:

Identification of factors contributing to churn and proposed strategies.

Predictive Model and Evaluation:

Trained predictive model and evaluation metrics.

Optimization Recommendations Report:

Actionable insights and recommendations for optimizing digital card sales.

A/B Testing Results:

Comparative analysis of A/B testing and its impact on key metrics.

Implementation Plan Document:

Detailed plan for implementing recommended changes.

Monitoring and Iteration Framework:

Framework for continuous monitoring and iterative improvement.