Thera Bank

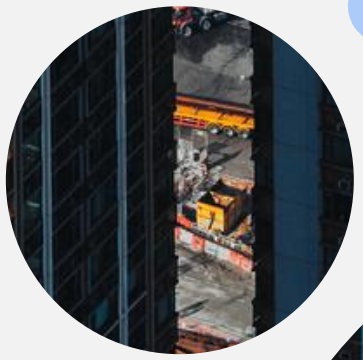
Credit Card Review

August 7th, 2021

Data Science Team

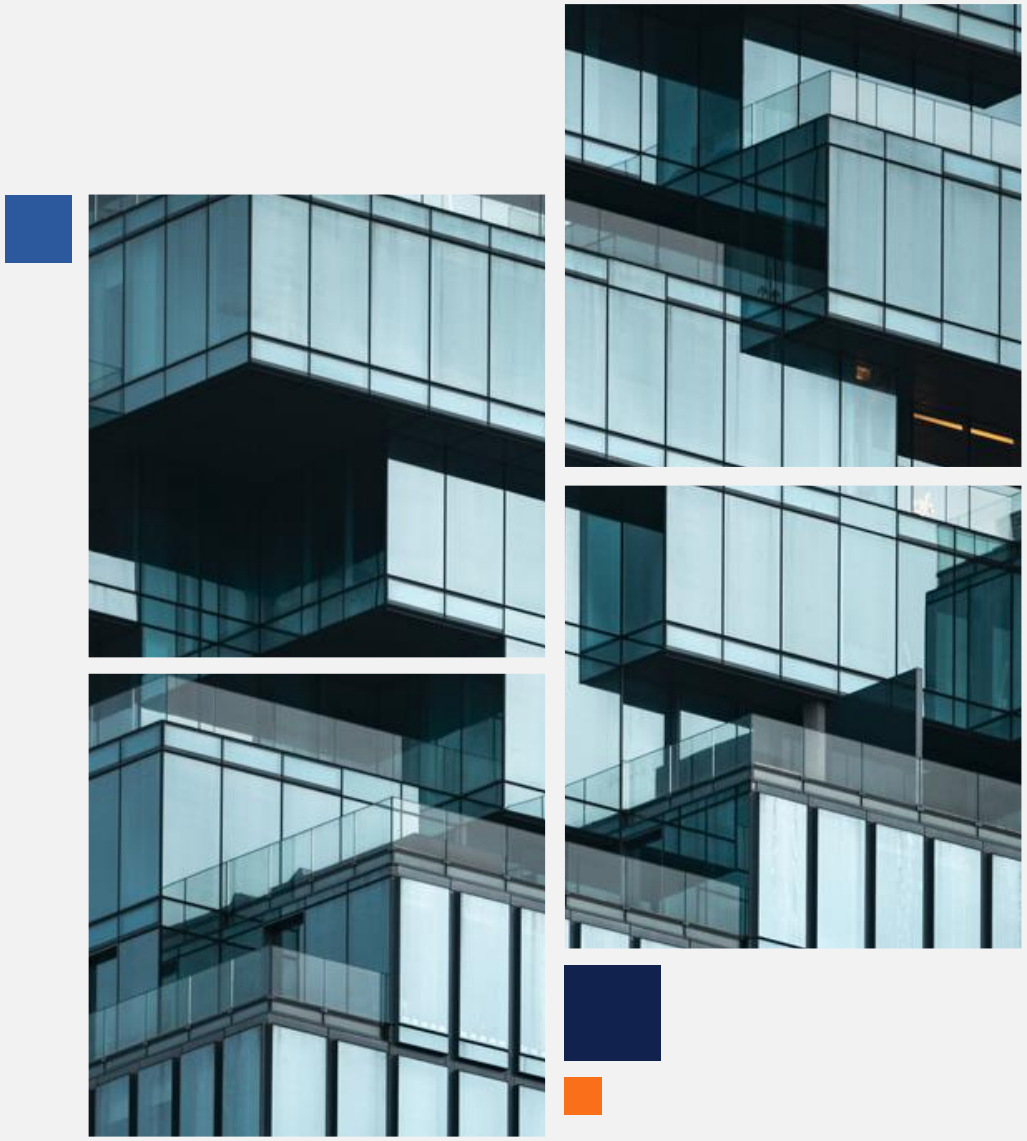
Agenda

- Business Overview of the Problem and Solution Approach
- Key Findings and Insights Which Can Drive Business Decisions
- Model Overview and Performance Summary
- Business Recommendations



Introduction

The Thera bank recently saw a steep decline in the number of users of their credit card, credit cards are a good source of income for banks because of different kinds of fees charged by the banks like annual fees, balance transfer fees, and cash advance fees, late payment fees, foreign transaction fees, and others. Some fees are charged to every user irrespective of usage, while others are charged under specified circumstances.a



Business Overview of the Problem and Solution Approach

Let’s dive in

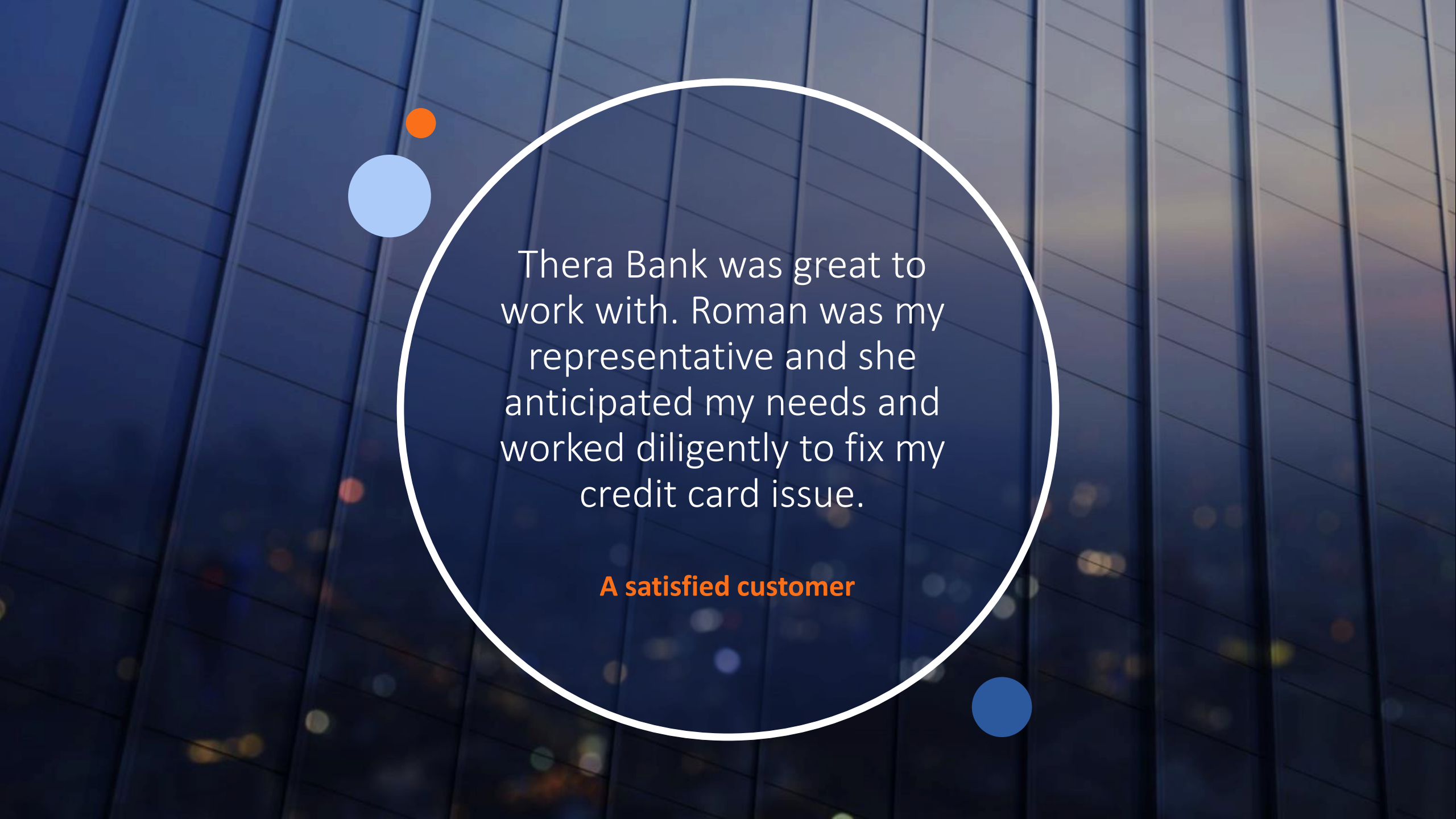
Problem

Customers’ leaving credit cards services would lead bank to loss, so the bank wants to analyze the data of customers and identify the customers who will leave their credit card services and reason for same – so that bank could improve upon those areas

Solution

You as a Data scientist at Thera bank need to create a classification model that will help the bank improve its services so that customers do not renounce their credit cards

You need to identify the best possible model that will give the required performance


Thera Bank was great to work with. Roman was my representative and she anticipated my needs and worked diligently to fix my credit card issue.
A satisfied customer

Team

Ana

Data Engineer

Roman

Credit Sales Representative

Joe

Data Scientist

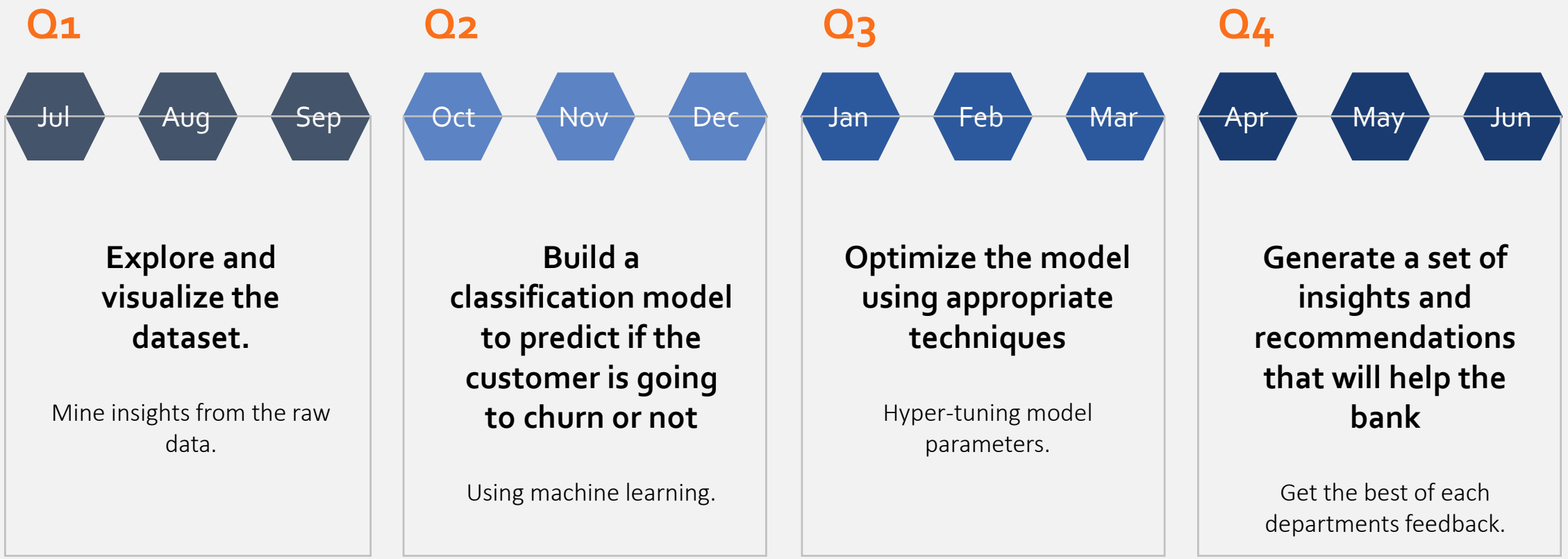
Jim

Credit Services Representative

Larissa

Marketing Manager

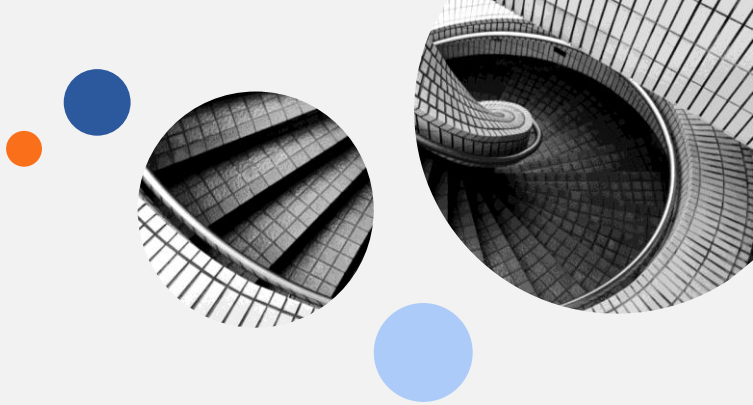
Project Timeline



Data Catalog

Feature	Description
CLIENTNUM	Client number. Unique identifier for the customer holding the account
Attrition_Flag	Internal event (customer activity) variable - if the account is closed then "Attrited Customer" else "Existing Customer"
Customer_Age	Age in Years
Gender	Gender of the account holder
Dependent_count	Number of dependents
Education_Level	Educational Qualification of the account holder - Graduate, High School, Unknown, Uneducated, College(refers to a college student), Post-Graduate, Doctorate.
Marital_Status	Marital Status of the account holder
Income_Category	Annual Income Category of the account holder
Card_Category	Type of Card
Months_on_book	Period of relationship with the bank
Total_Relationship_Count	Total no. of products held by the customer
Months_Inactive_12_mon	No. of months inactive in the last 12 months
Contacts_Count_12_mon	No. of Contacts between the customer and bank in the last 12 months
Credit_Limit	Credit Limit on the Credit Card
Total_Revolving_Bal	The balance that carries over from one month to the next is the revolving balance
Avg_Open_To_Buy	Open to Buy refers to the amount left on the credit card to use (Average of last 12 months)
Total_Trans_Amt	Total Transaction Amount (Last 12 months)
Total_Trans_Ct	Total Transaction Count (Last 12 months)
Total_Ct_Chng_Q4_Q1	Ratio of the total transaction count in 4th quarter and the total transaction count in 1st quarter
Total_Amt_Chng_Q4_Q1	Ratio of the total transaction amount in 4th quarter and the total transaction amount in 1st quarter
Avg_Utilization_Ratio	Represents how much of the available credit the customer spent

Key Findings and Insights



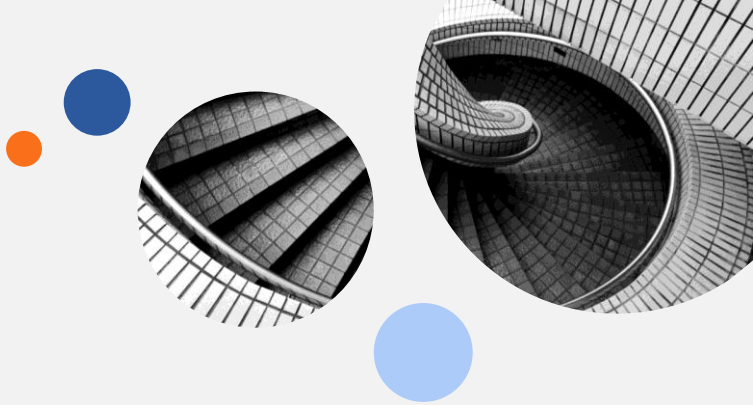
Exploring the data

- Most customers are female
- Most have graduate degrees
- Most make between

Attrition Identifiers

- There is little difference in likelihood of attrition based on age, gender, or marriage status
- Maintain growth
- Diversify investment in sector 2

Key Findings and Insights



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Model Overview and Performance

Model

- Increase customer satisfaction by 2%
- Maintain growth

Matrix

- Decrease the number of rotations by at least 2
- Ensure the cost of development stays below budget

Score

- Interns begin
- Indoor rec leagues
- Chess tournaments

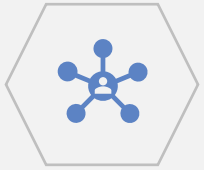
Business Recommendations

Get a Cost-Matrix

Use the same data but an alternative approach to modeling the prediction.

Get environmental data

Gather data about customers from external sources to include in analysis.



Our team is growing

We welcomed 3 new team members last quarter

Our business is good

Profits are up in the last quarter by 3%

We're getting our work done

We finished the consolidation project

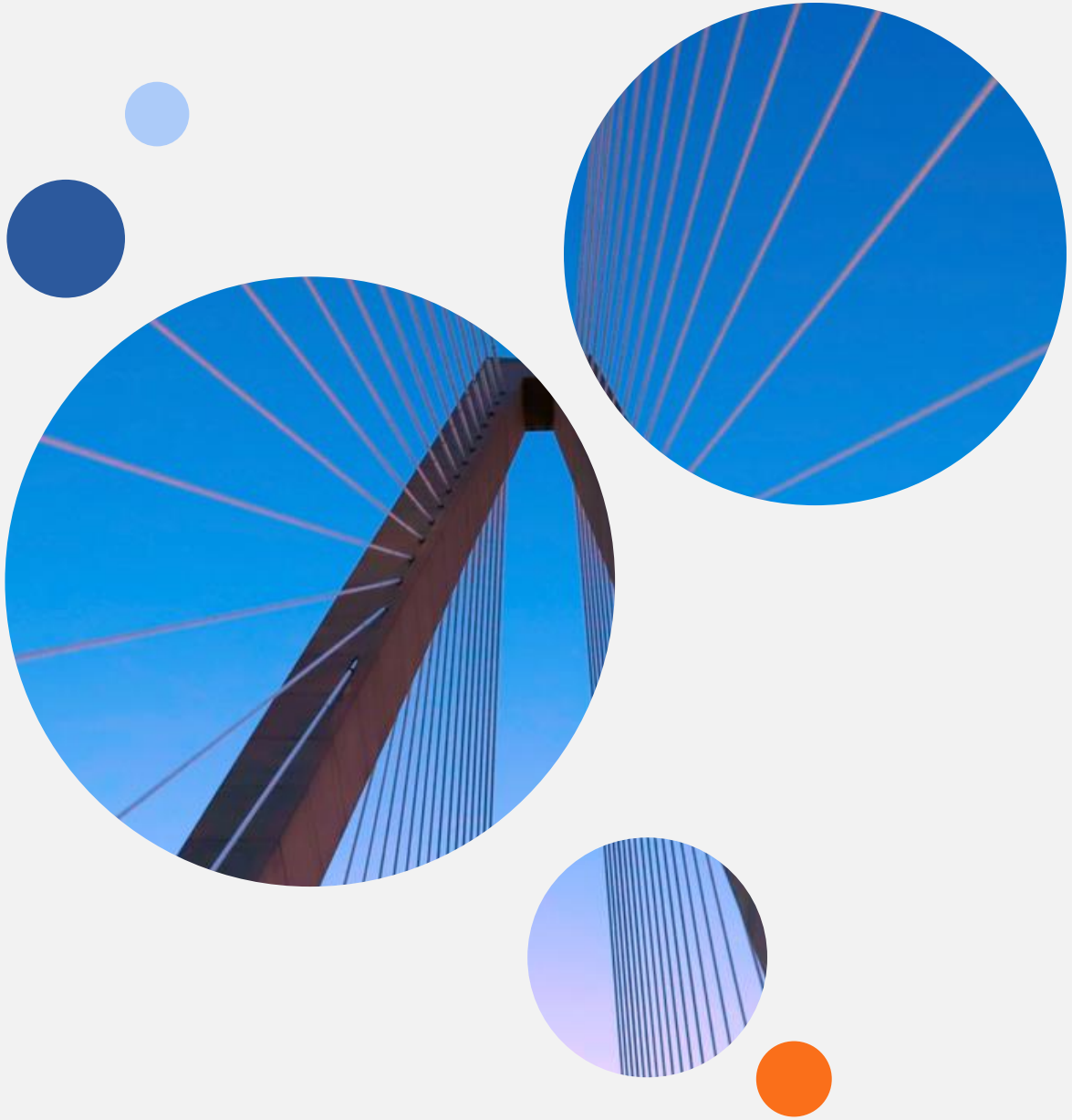
We're leaders

We are top leaders in the industry across the board

Conclusion

Thanks to your commitment and strong work ethic, we know next year will be even better than the last.

We look forward to working together.



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