Characteristics of Credit Card Defaulters

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Outline/ Description

What questions are we answering?

We will analyze information from banks about credit card defaulters and their financial and domestic situations.

We hope to identify trends that impact the likelihood of a customer failing to pay off their loans and how those trends can help banks approve or deny future loan applications.

Our Research Questions

We will be examining the financial situations of credit card defaulters by looking into their:
- Income
- Occupation type
- Age
- Where they live – the bank's rating for their region
- Family status and gender

Will compare the situations of credit card defaulters to non defaulters.

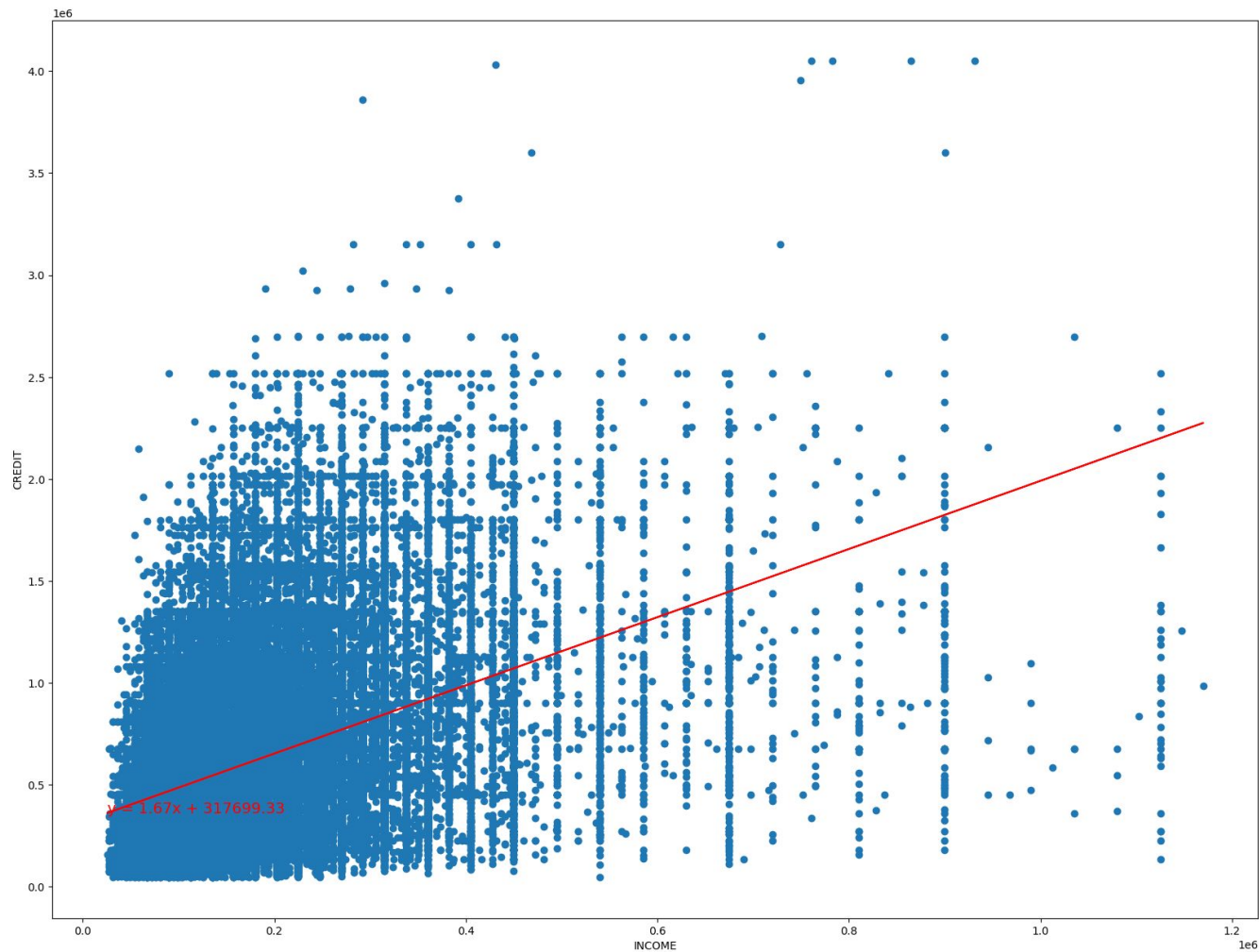# Overview of the Data

Data collection, cleanup and exploration

[Our dataset](#) from Kaggle

Data Analysis Process & Challenges

1. There are many different columns of data in this dataset. Due to time limitation we are only able to analyze part of it.
2. Raw data imported and cleaned through pandas. Main dataframe is split into 2 sub-dataframes based on 'Target' column.
3. Outlier from income column was dropped using z-score.
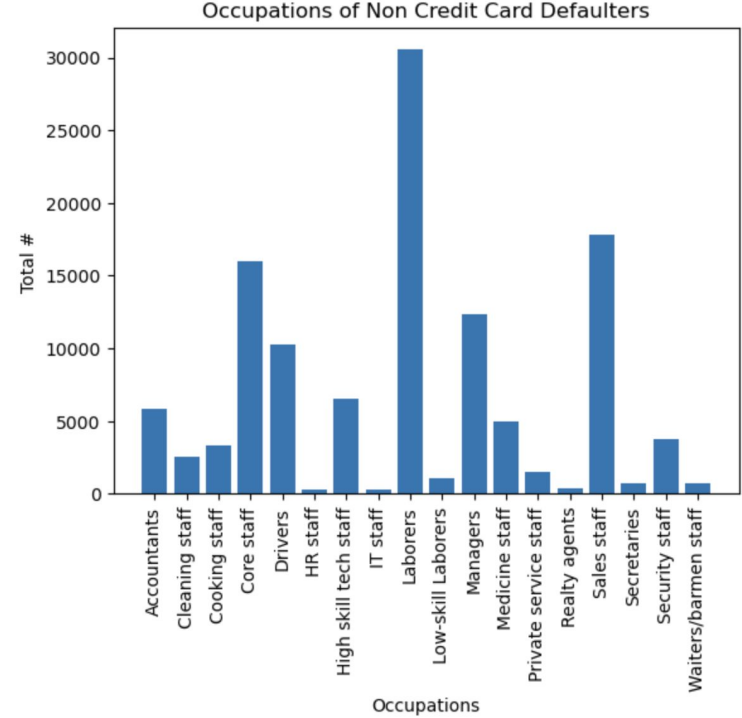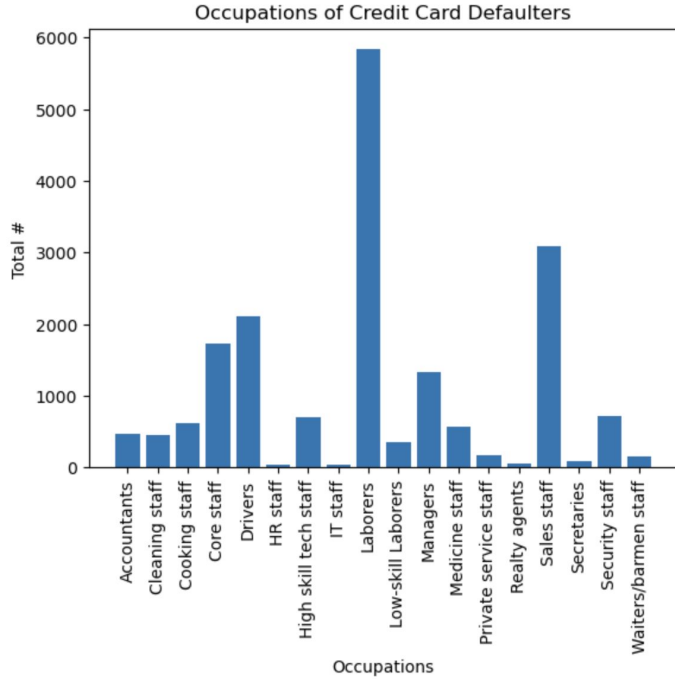
Income vs Loan Applied

Both defaulters and non-defaulters

y = 1.67x + 317699.33

There is a moderate correlation between client's income and how much credit they have applied for.
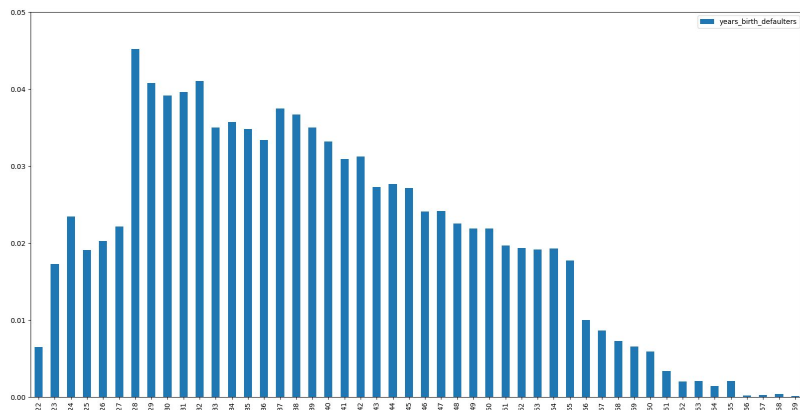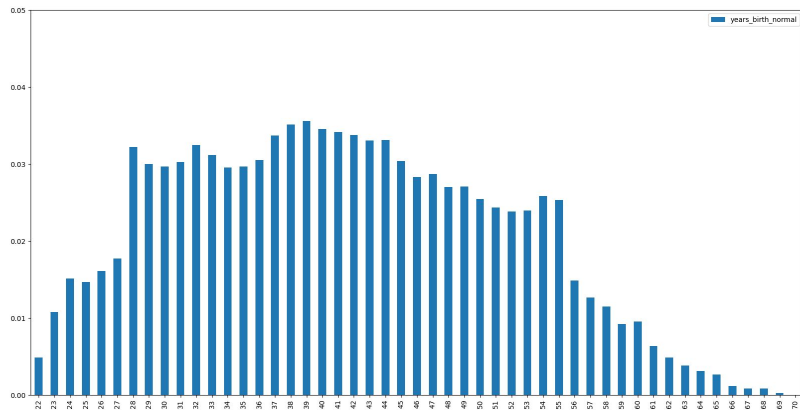
Occupation

Defaulters vs Non-Defaulters

Very small change within the distributions of occupations of credit card defaulters vs. non credit card defaulters.
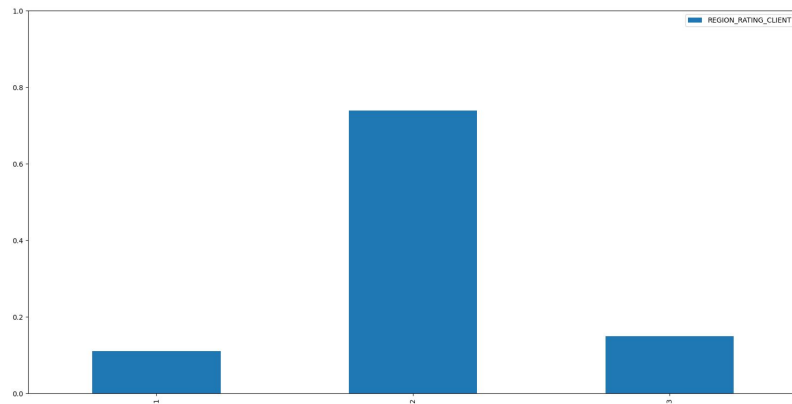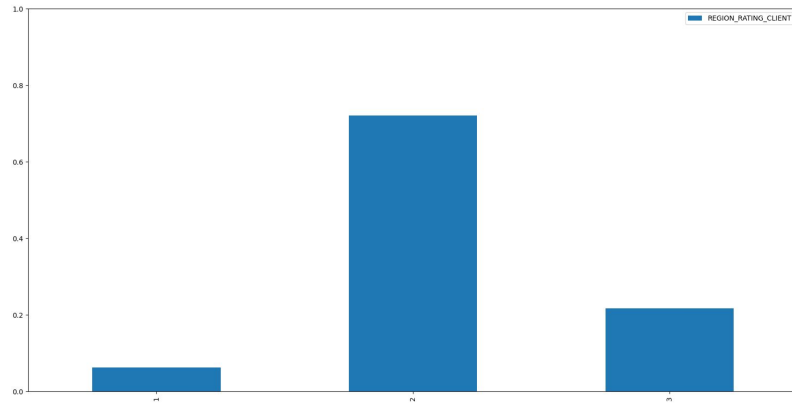
Age

Defaulters vs Non-Defaulters

Both Non-defaulter and defaulter are left skewed. There is slightly higher percentage of defaulters in younger age groups.
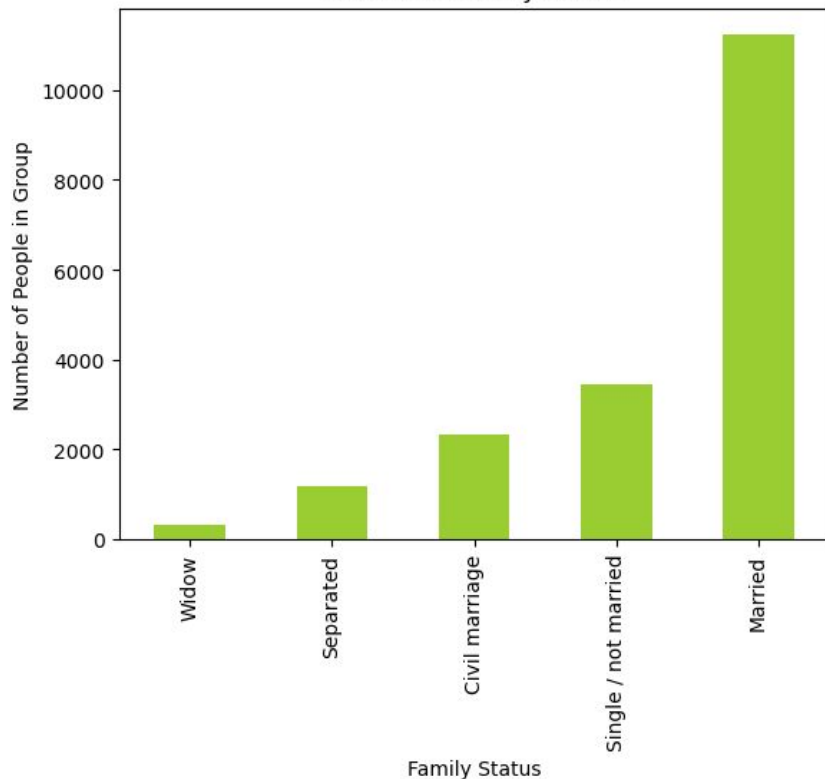
Location

Defaulters vs Non-Defaulters

The bank has 3 level of rating for client's address region. Non-defaulter has higher percentage than defaulter in region rated 1, similar percentage in region rated 2, and lower percentage in region rated 3.
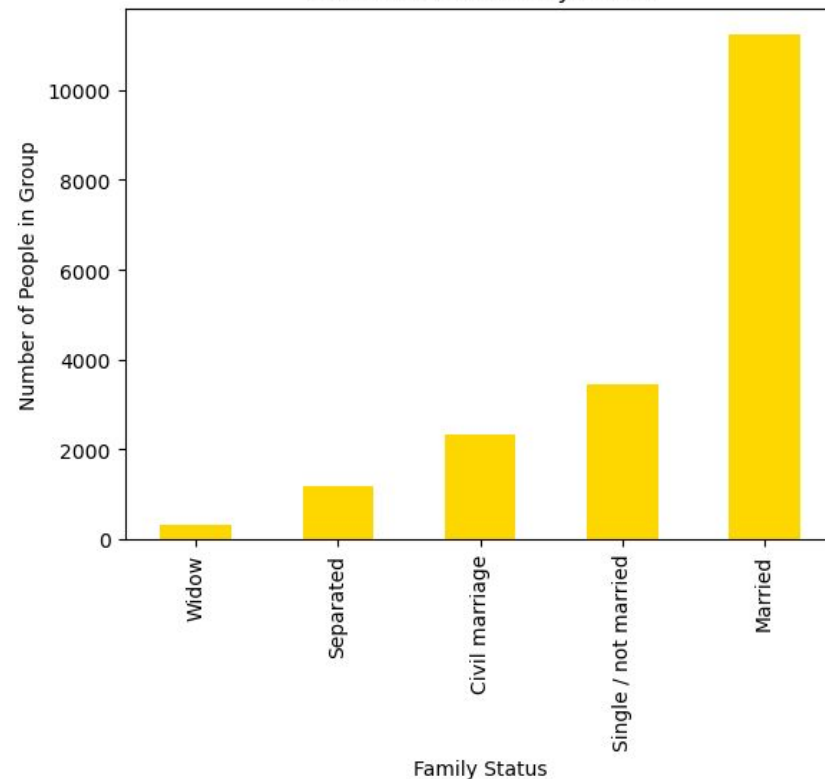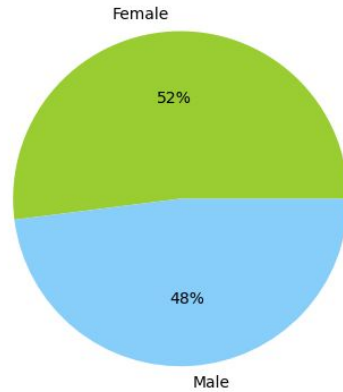
Family Status

Defaulters vs Non-Defaulters
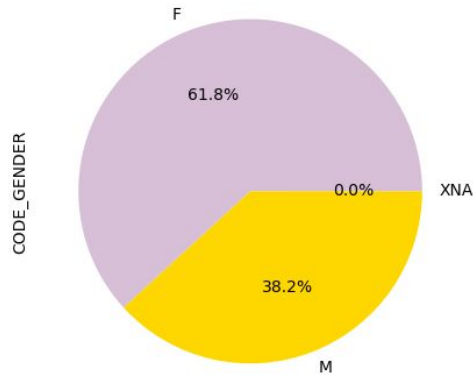
Comparing the family status of defaulters with non-defaulters

Gender Distribution
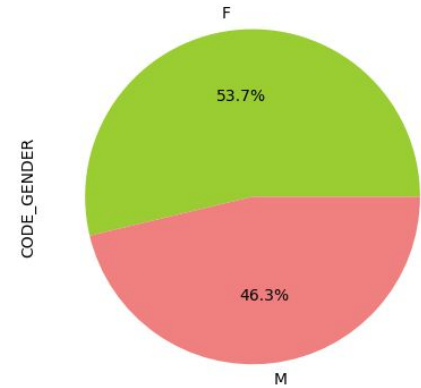
Defaulters, Non-Defaulters and Tax Filers in Canada

Gender Distribution of Non-Defaulters

Gender Distribution of Tax Filers in Canada (2021)

Gender Distribution of Defaulters

Comparing the gender distribution of defaulters, non-defaulters and tax filers in Canada

Implications

What did we learn?
What could we have done differently?

We originally had the assumption that there would be obvious differences between defaulters and non-defaulters.

Perhaps with a different dataset (that includes location) we may have been able to draw stronger conclusions.