

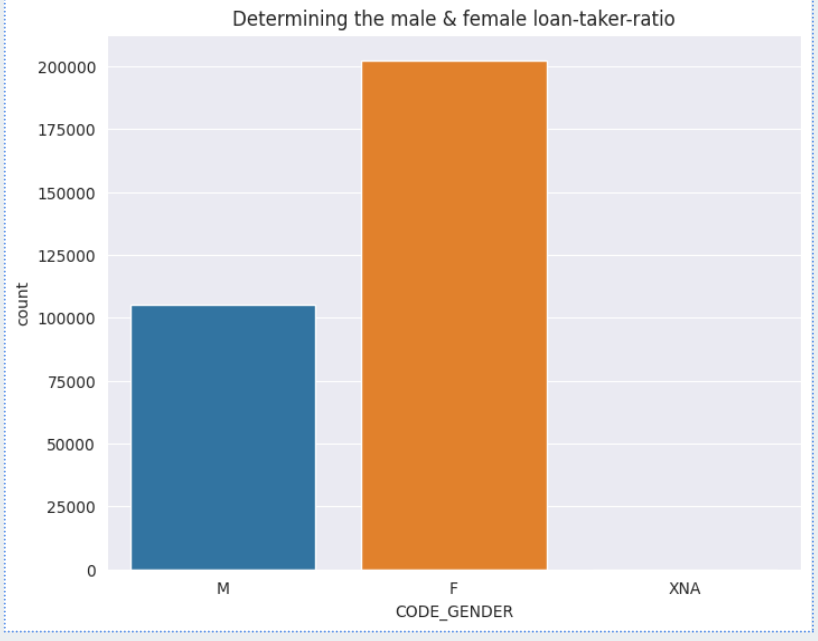
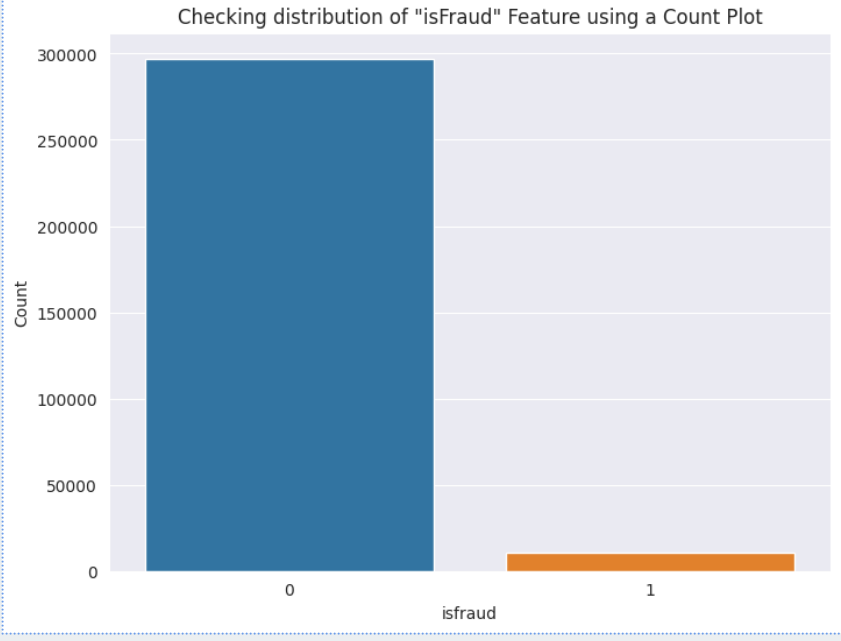
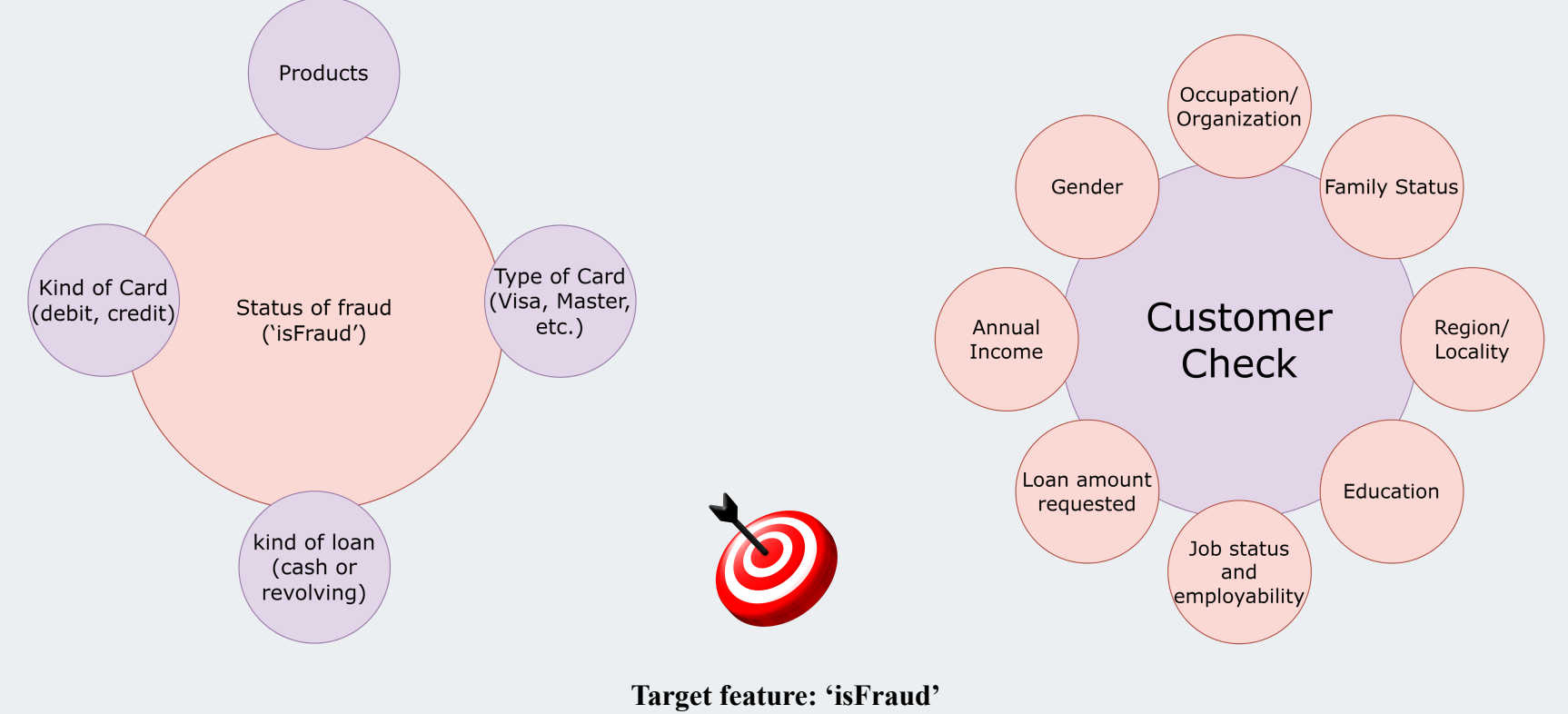
Finding Fraudsters at Trust Bank

Trust thieves... tackled!

Significance of bank fraud detection: Bank frauds includes a wide range of fraudulent activities like credit card fraud, loan fraud, false loan applications, check fraud, online banking fraud, and more. The regulatory and legal implications of the bank also demands the need for compliance with anti-fraud laws and regulations. Early detection and stopping of all kinds of bank fraud is critical because it poses a substantial threat not only to the stability and security of the bank but also to the funds and data of our customers.

For the Trust Bank, maintaining customer trust and a positive reputation is a **MUST**. **Trust Bank** employs the best strategies, the most latest and advanced cutting-edge technologies, and emerging trends, such as the use of artificial intelligence and blockchain technology, machine learning, data engineering, anomaly detection, and fraud monitoring systems for effective fraud detection and prevention to keep our customer's data and funds safe, ensuring their long-term relationship with the bank.

Key Dataset for Bank Fraud Detection: Stage 1 & 2



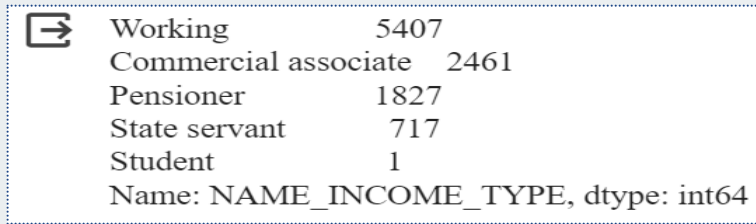
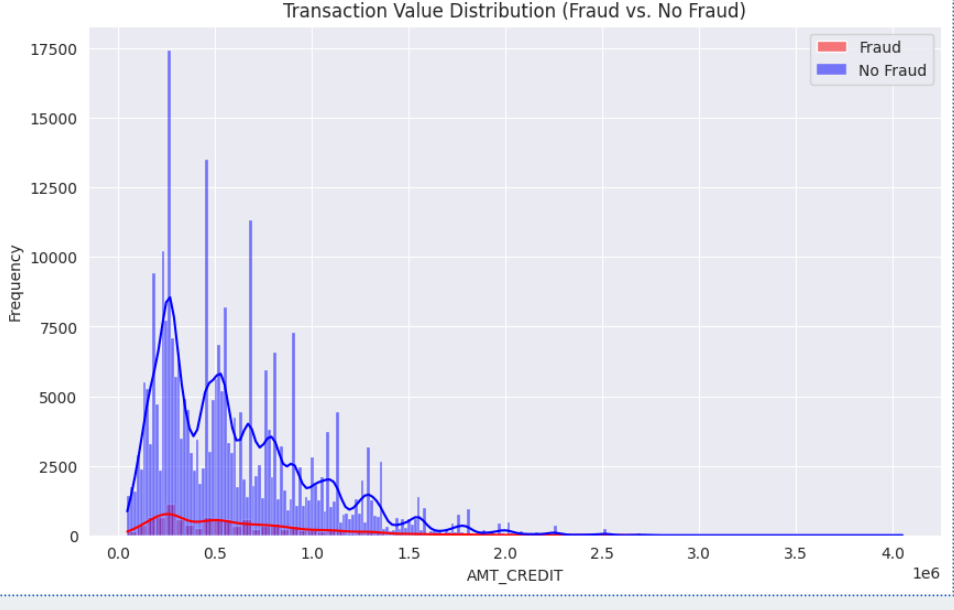
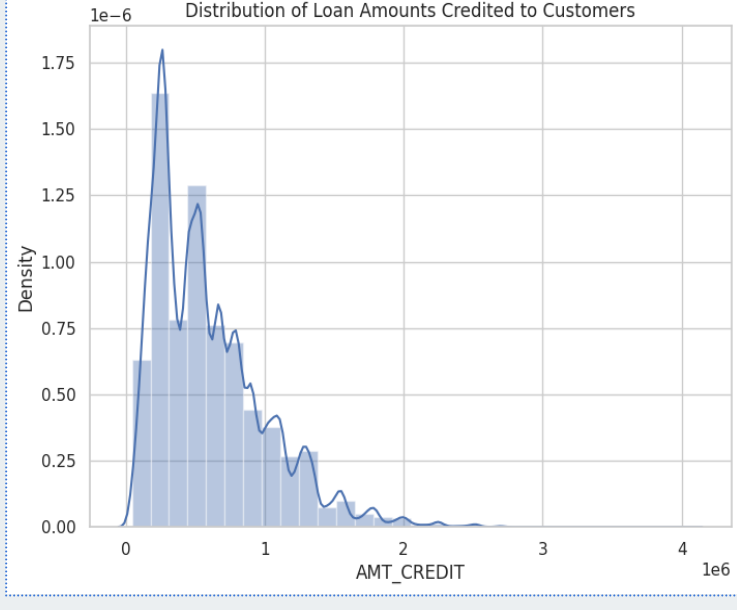
Result: Wowie!! Females 🍀 are leading (actually double) in the number of loan takers when compared to males.

Now let's find the predominant fraudulent gender:



Result: Females leading in FRAUD too... Oh dear!!

Now, let's see the distribution of loan amounts credited to the customer:



Detecting the Predominant Fraudulent Client Type

Result: **Damn!** A student is involved in Fraud too! Working class clients lead the league of fraudsters followed by commercial associates, pensioners, state servants and a student, in that order.

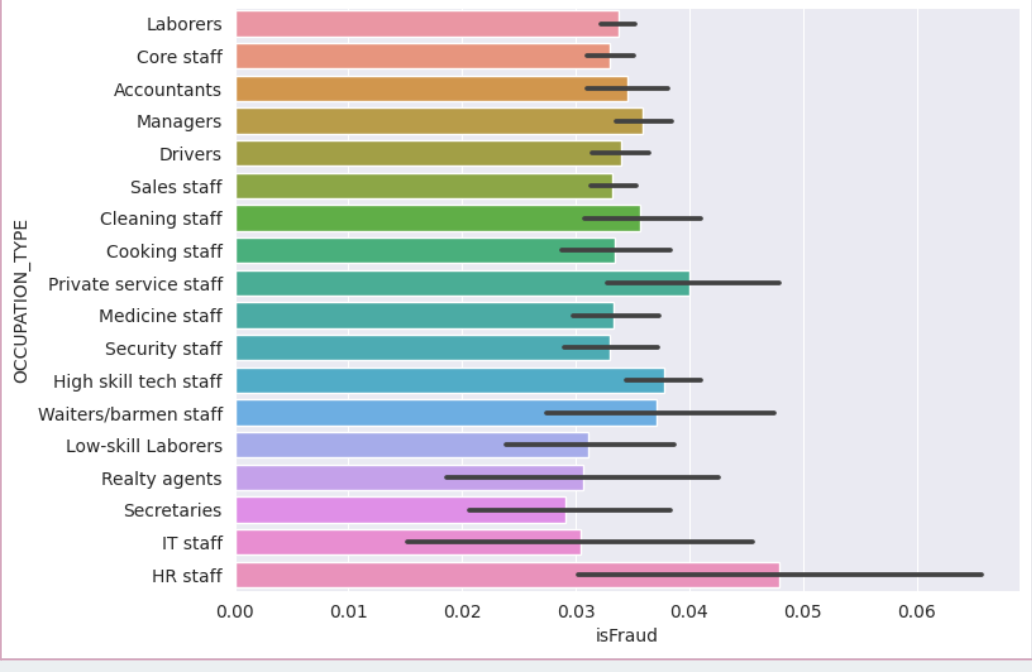
Checking Predominant Fraudulent Loan Type

Result: Cash loans seem to be the most fraudulent.

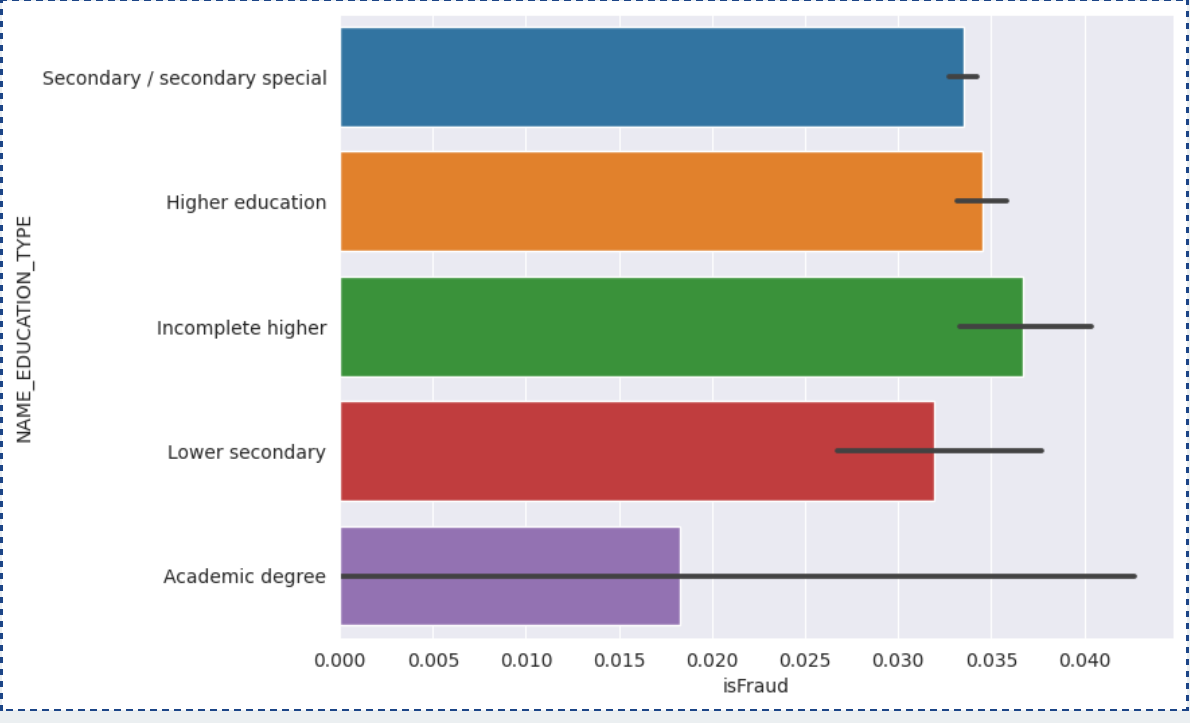


Now, let's plot a Barplot to find a pattern in terms of occupation:

Result: The HR Staff does the most frauds.

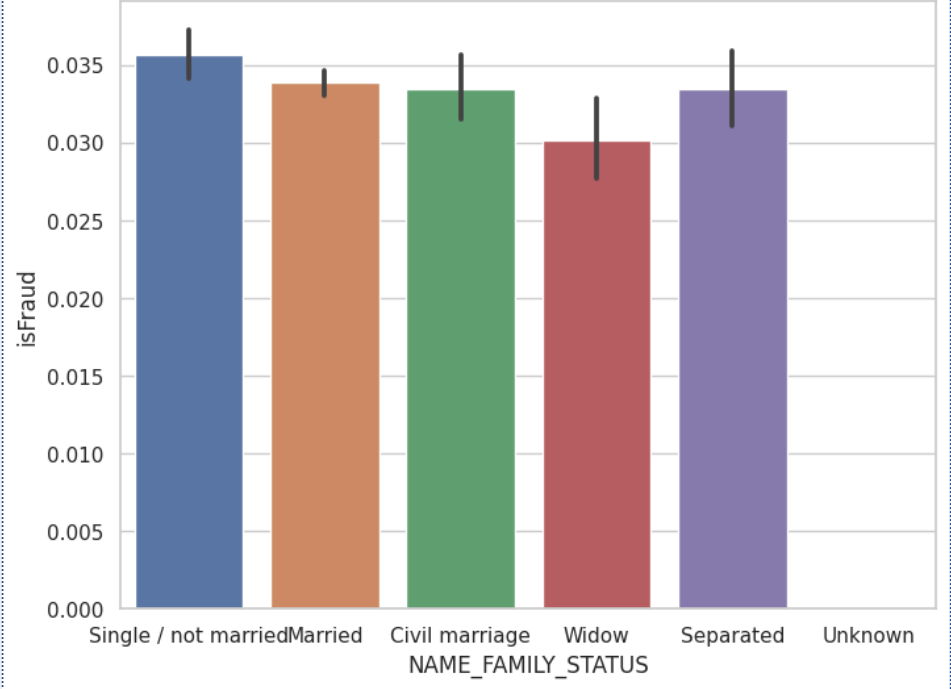


Bar chart for education type (ordinal data) and isFraud feature... to find a pattern



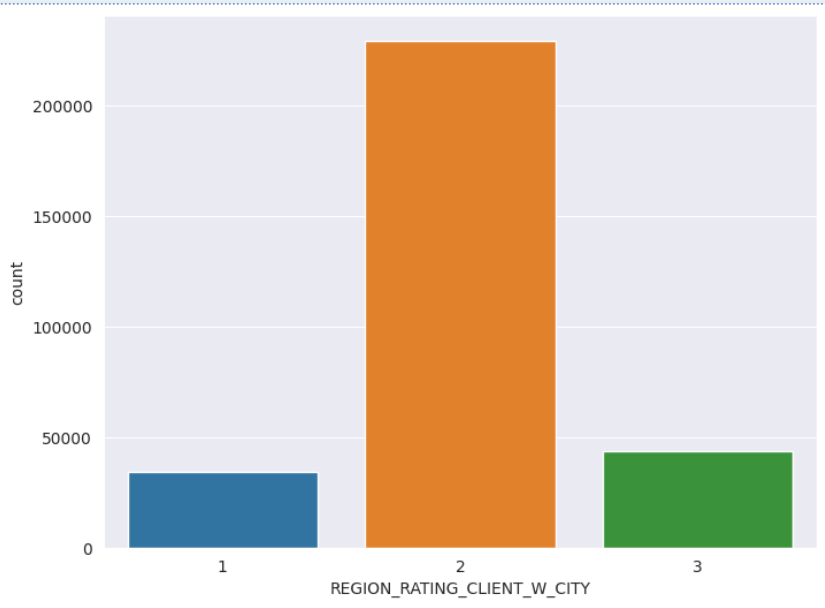
#Result: Almost everyone commits frauds... None in particular!

Let's spot fraudsters in terms of family status:



Result: The family status doesn't really matter.

Client's Region Rating according to Bank



Result: Most clients of the bank belong to the region rated 2

Conclusion: Based on the data exploration, preprocessing, visualization and manipulation methods — it would be advisable to the bank to **NOT** give loans to female working professionals, specifically the HR Staff, who apply for cash loans while residing in the region rated 2 by the bank.

- End of Story -