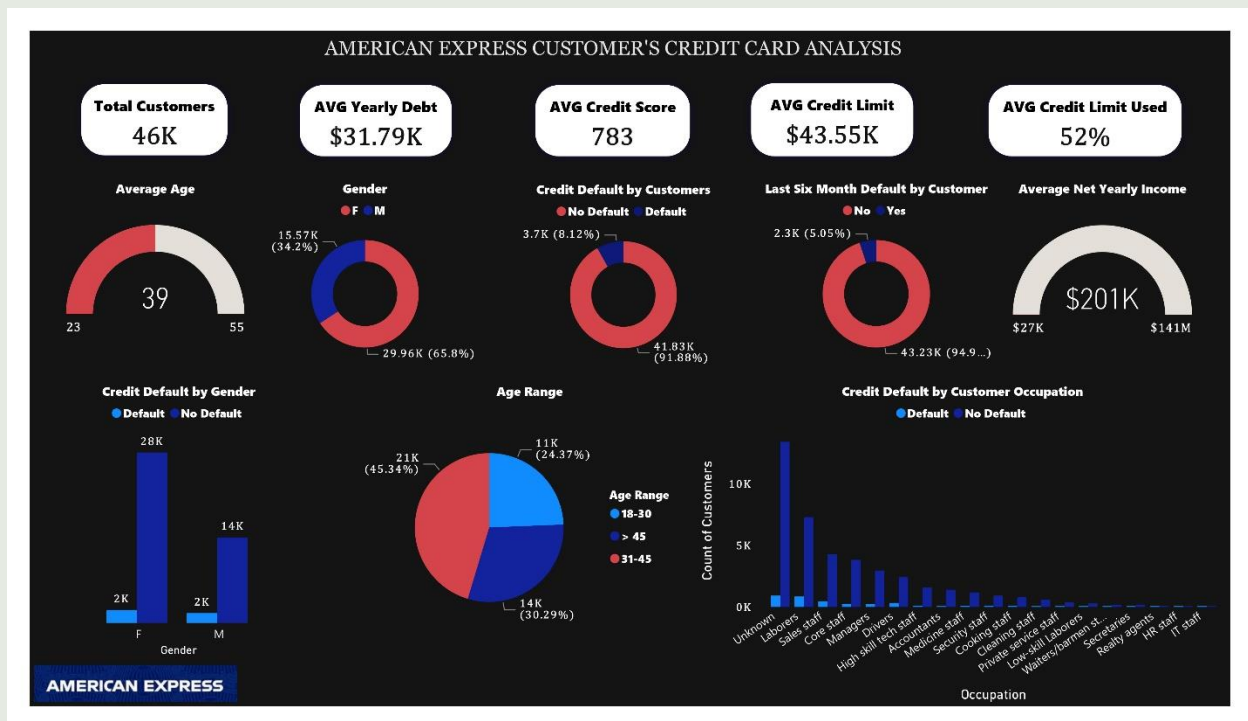


American Express Customer's Credit Analysis: EDA with PowerBI

This analysis presents key insights from American Express customer credit data, visualized using PowerBI. The data provides an in-depth look at customer demographics, financial profiles, credit insights, and other significant information. The extended report offers a comprehensive analysis using statistical modeling to predict credit card default, customer segmentation, and business implications with Python. It can be found via the following link;

[Credit risk modelling and Business implications; A case study of American Express.](#)



Credit Card Analysis Dashboard

Key Observations:

1. Customer Demographics and Financial Insight

- The average age of the customers is 39 years old, indicating that most are still in their active years.
- The customer base is predominantly male and skewed towards older age groups, with nearly half of the customers over 45 years old.
- Customers generally have a high average income, which correlates with their high average credit score and significant credit limits.

2. Credit Default Insights

- The majority of the customers (91.88%) have a good credit score with no default history.
- The default rate has improved in the last six months, decreasing from 8.12% to 5.05%, indicating positive trends in customer credit behaviour.
- The default rate among females is lower than among males, with females accounting for 2K defaults out of 30K total, compared to 2K defaults out of 16K total for males.
- Higher default rates are observed in specific occupations, including unknown occupations, labourers, and sales staff. This indicates that certain job categories are more prone to credit defaults, which could be due to varying income stability or financial management skills across different professions.

Strategic Recommendations:

1. Credit Risk Management

- To mitigate higher default risks associated with certain job categories, it is recommended that occupation-specific credit risk assessment and management strategies be prioritized. Financial products and services should be tailored to suit these groups' needs and financial behaviours.
- Since females exhibit a lower default rate, consider promoting credit products more aggressively within this demographic to leverage their better credit behaviour.

2. Enhanced Credit Monitoring and Support

- Implement early warning systems to identify customers at risk of default, particularly within high-risk occupations. Offer financial counselling and tailored repayment plans to support these customers.
- Provision of financial literacy programs and resources to improve credit management skills, focusing on demographics and occupations with higher default rates.

3. Marketing and Product Development

- Develop and market products that cater to the needs of different age groups, with special attention to the over-45 segment, which forms a significant portion of the customer base.
- Introduce rewards and incentives for maintaining low credit utilization rates and on-time payments, encouraging responsible credit behaviour.

4. Income-Based Segmentation

- Given the high average income, consider offering premium financial products and services that cater to high-net-worth individuals, enhancing customer loyalty and profitability.
- For customers with incomes on the lower end of the spectrum, offer flexible credit products and financial support programs to help manage debt and improve financial stability.

5. Continuous Monitoring and Adaptation

- Conduct regular analysis of credit default trends and demographic shifts to adapt strategies.
- Utilize advanced analytics to predict and prevent defaults, ensuring strong credit portfolio management.