

Commonwealth Bank of Australia

Data Science – Targeting Demographics for Savings Feature

Prepared by: Mingxuan Li

Date: 08/07/2025

Executive Summary

Idea of been given by the CEO to create a savings goal for the customer to save towards preset amount. The function is being created by the mobile teams and the sales team have been asked to create advertisement for the function. Considering the demographics of such users, the data science team had been tasked to find the target audience for targeted advertisement. This information is also helpful to the UX/UI design process, concentrating more towards the targeted audiences.

Methodology

For this analysis we used python to analyse the dataset and used python to extract the useful dataset needed for analysis. Our data are converted first to csv before loaded into panda data frame for further analysis.

Data such as currency and country were removed from database as all existing data are derived from Australia and utilised the Australian dollar. Other data such as balance and location are removed from database as they provide little correlation to each user. Some users are frequent travellers, making their location vary from time to time. We also utilised the customer ID instead of first name as many users share the same first names.

Some assumptions are made to our users when it comes to our target audiences.

1. It is assumed that the target audience would need to have the ability to save without compromising their current lifestyle (positive net flow).
2. It is assumed that our audience are frequent users of our online app (phone bank usage)

Filter used:

- Group the user by customer ID, movement (credit/debit)
- Limits the txn_description to phone bank
- Added together each of the credits and deduct the debits

Analysis

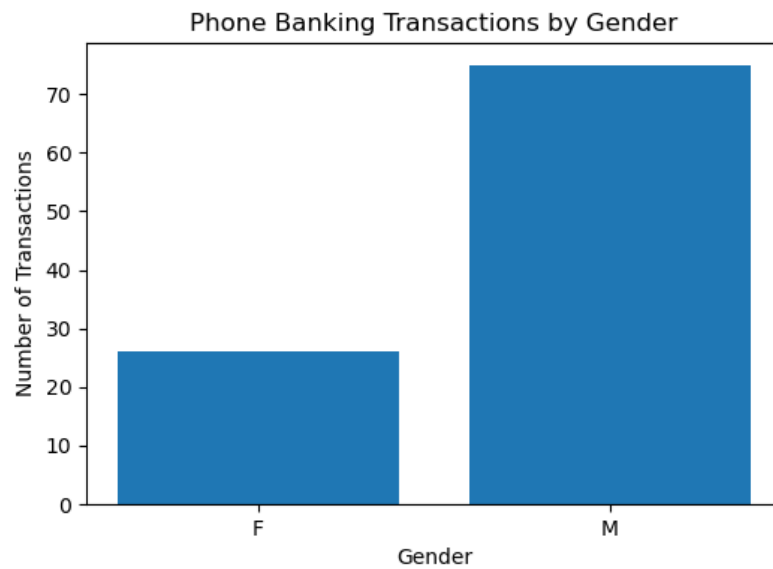


Figure 1: Number of mobile banking used by both male and female.

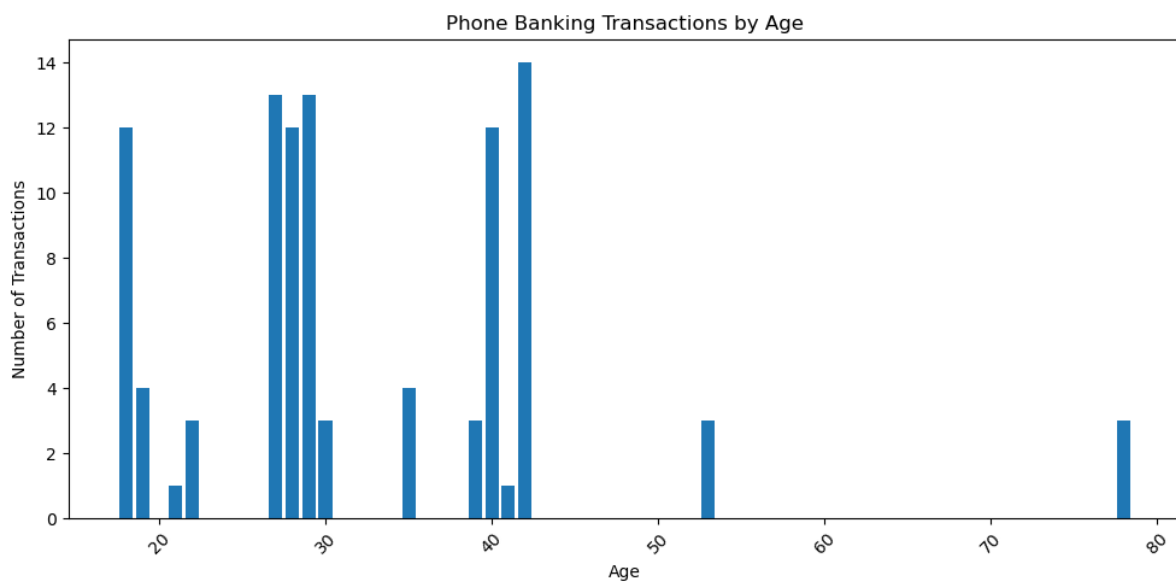


Figure 2: Number of mobile banking used by different age demographic.

From figure 1 we can see that there are significantly more mobile transactions performed by male than female. While majority of mobile transactions occur with the 20 to 40 age demographics.

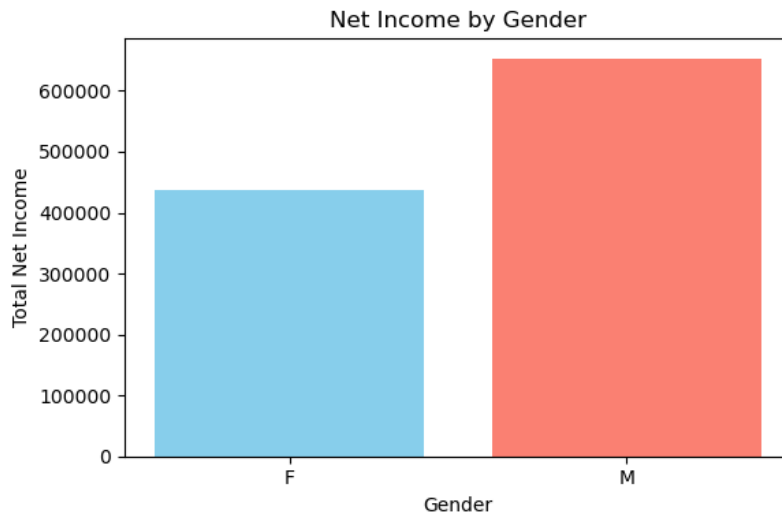


Figure 3: Comparison of net income between different gender.

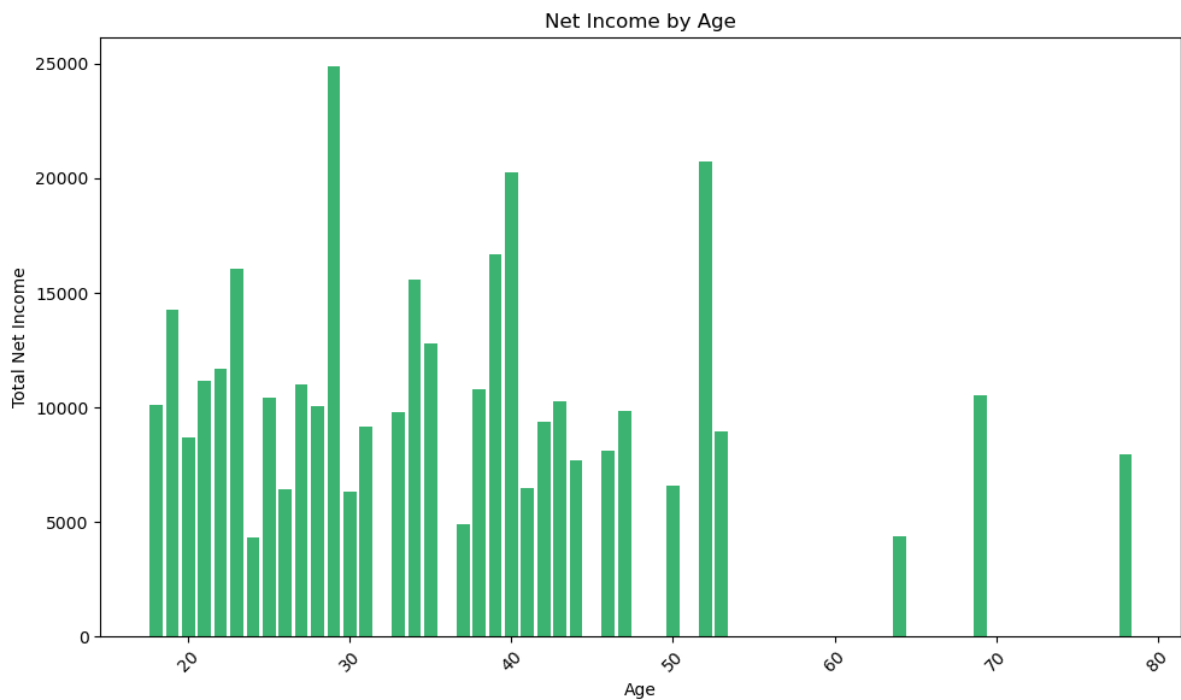


Figure 4: Average net income differences between age demographics.

With the net income we can see that male income surpassed female net income and the standardised age vs income graphs shows that the net income remained high within 20 to 50 years old.

Despite the difference between male and female count within the graph (44 female vs 56 male), we still see a major male usage in mobile CBA app and net incomes. The demographic suggests that majority of users that both uses mobile app and have large net income are between the ages of 20 to 40.

Insights & Interpretation

It's from the analysis that we can see there is a shift towards a younger and male dominated audiences. The saving goal might include more activity icons or associations towards a more youthful and more adventure driven perspectives that might attract more younger male audience to participate in the new savings feature.