

Exploratory Data Analysis on ANZ Transaction Dataset

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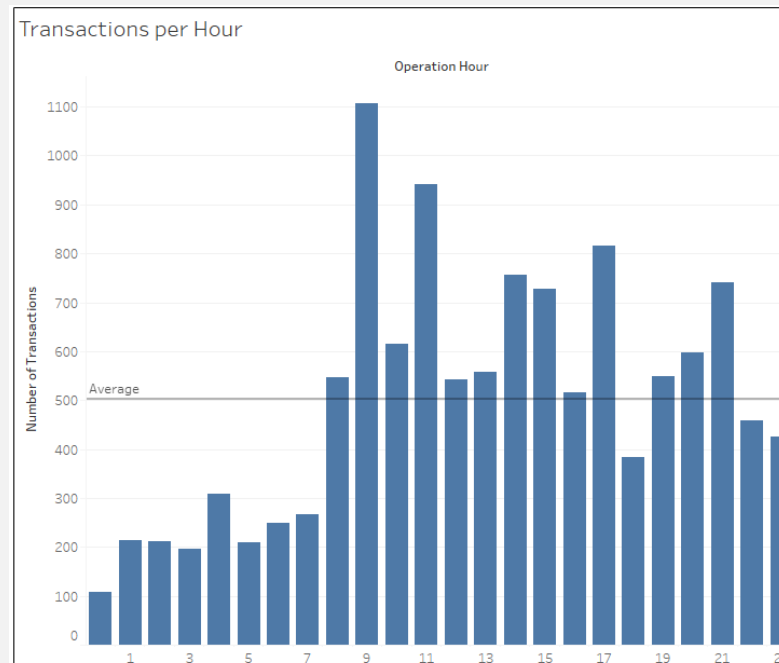
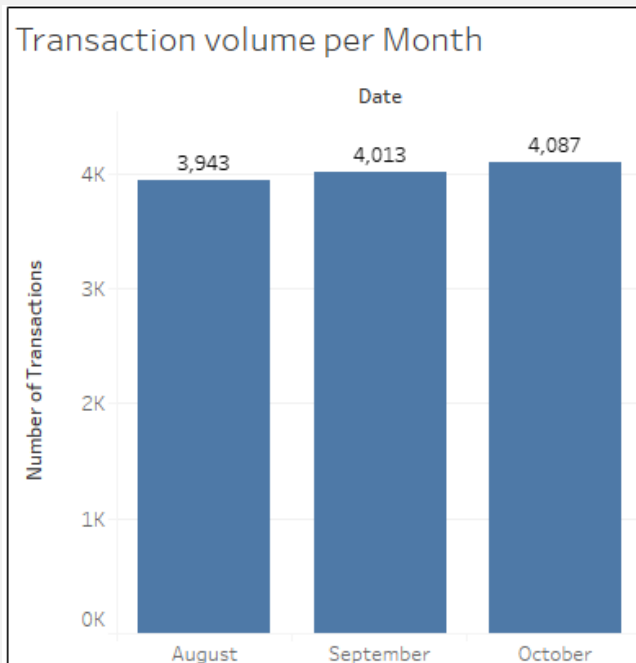
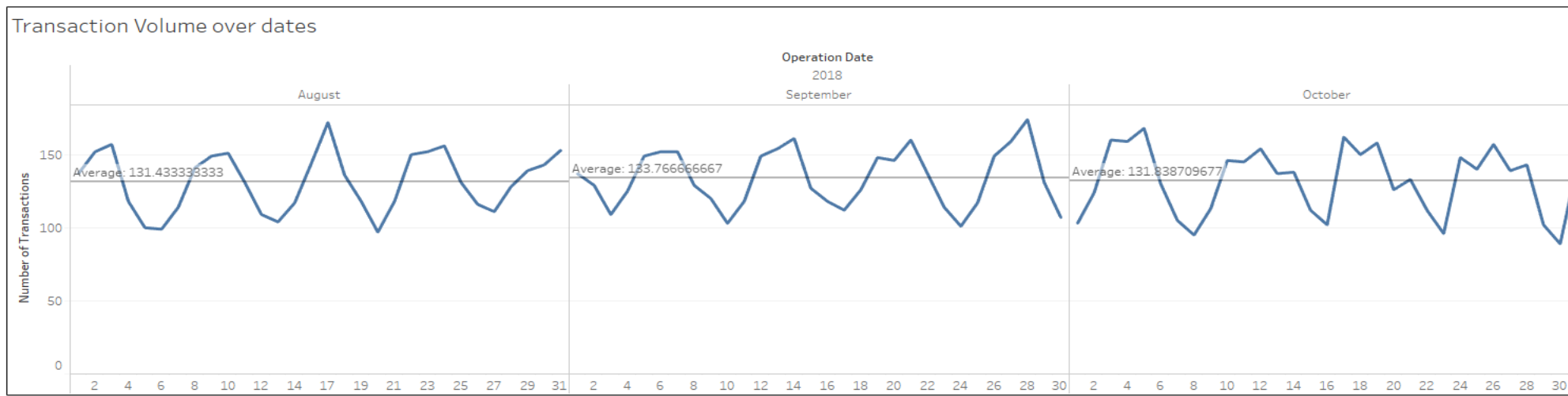
DETAILS ON DATA

- We have been provided with transactional data over 91 unique dates from 08/01/2018 to 10/31/2018, being 08/16/2018 the missing date during that period of time.
- We have a total of 100 customers and 12043 transactions.
- All the data is from Australia.
- The dataset contains 23 fields from which 7 of them have some missing data:
card_present_flag, bpay_biller_code, merchant_id, merchant_code, merchant_suburb, merchant_state and merchant_long_lat.

But because of the nature of those fields, this doesn't implicate a problem for the analysis.

TRANSACTION VOLUMEN INSIGHTS

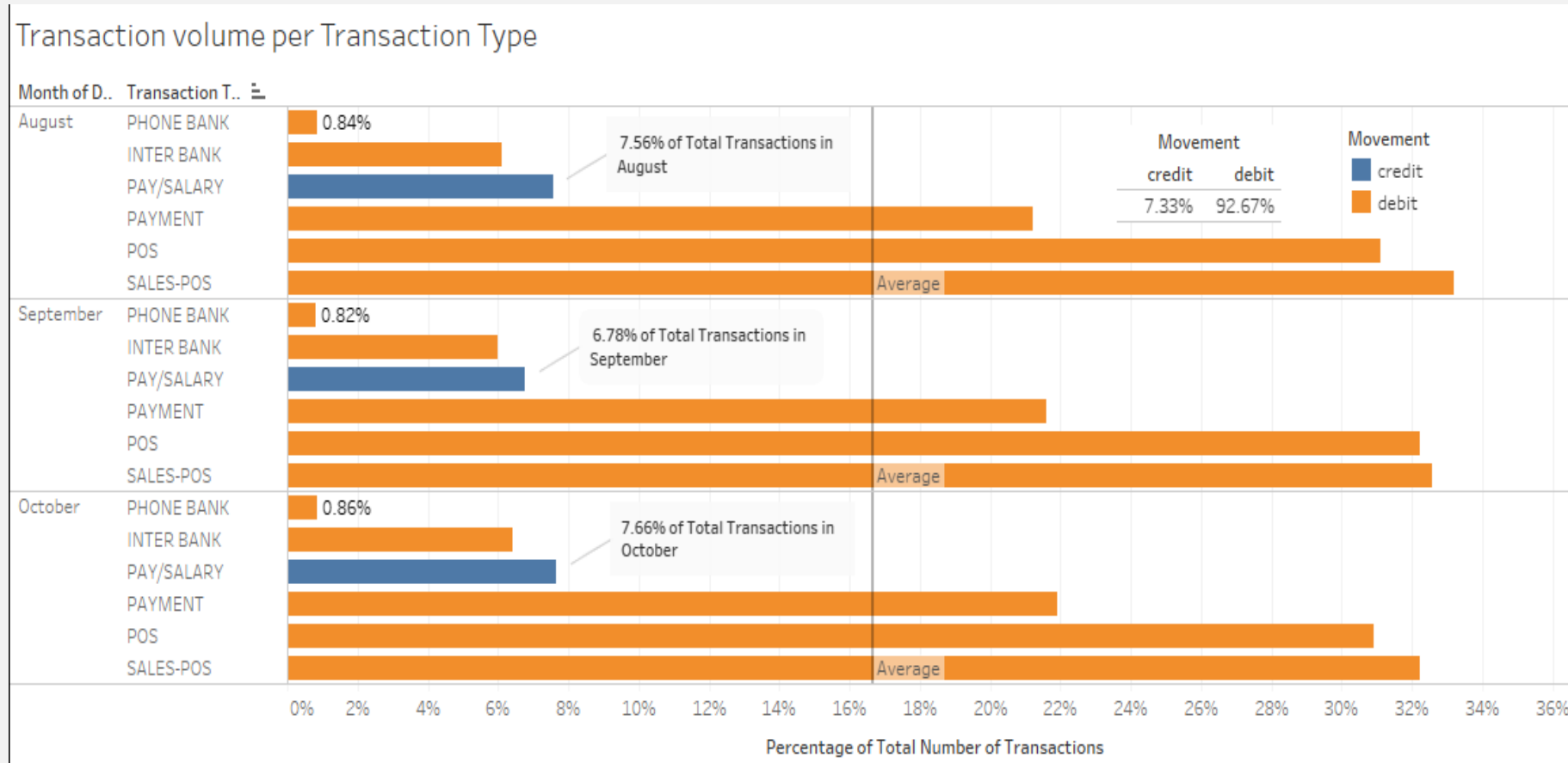
Available at <https://public.tableau.com/profile/gaston.tavara#!/vizhome/EDA-ANZtransactionDS/TransactionAnalysis>



- The average and the total number of transactions are very similar for each month.
- The period of time when most of the average operations happen is between 8 am to 5 pm and from 7pm to 9pm.

TRANSACTION TYPES INSIGHTS

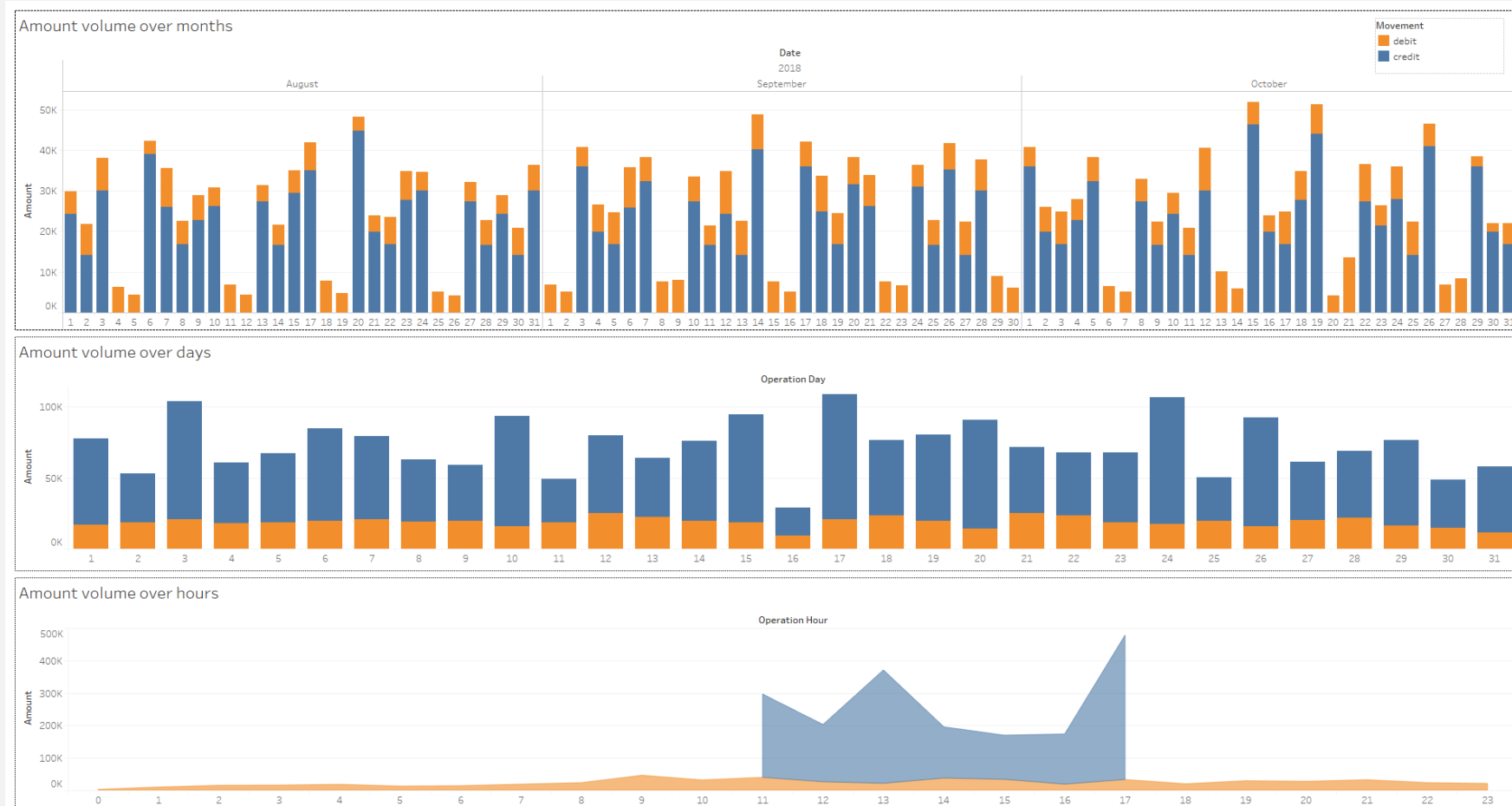
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- The Transaction type distribution is very similar in each month. Three of them are consistently common each month: Sales-Pos, Pos, and Payment.
- The bank might consider removing Phone Banking operations as it represents less than 1% of transactions each month.
- “Pay/Salary” is the only Transaction Type being done as a Credit Movement and represents 7.33% of Total number of transactions over 3 months.

TRANSACTION AMOUNT INSIGHTS

Available at <https://public.tableau.com/profile/gaston.tavara#!/vizhome/EDA-ANZtransactionDS/AmountVolumeAnalysis>

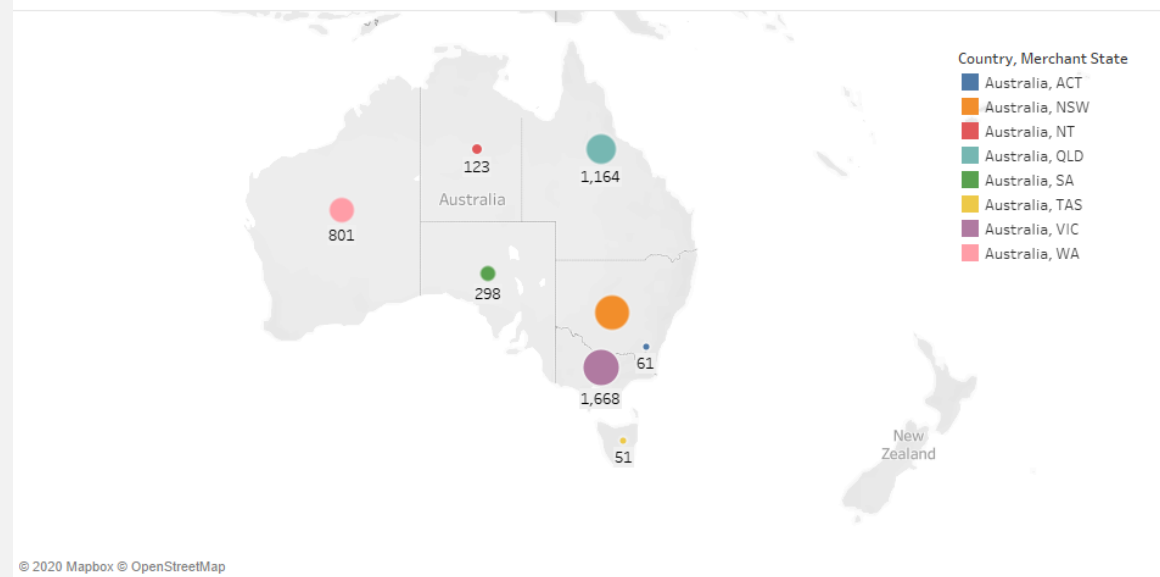


- Even though credit transactions are less than debit transactions(analyzed on previous slide), it represents a bigger amount value transaction.
- There are no credit movements on weekends.
- Credit transactions only occur from 11am to 5pm.
- There is an outlier on Day 16, probably due to missing data on August 16th.

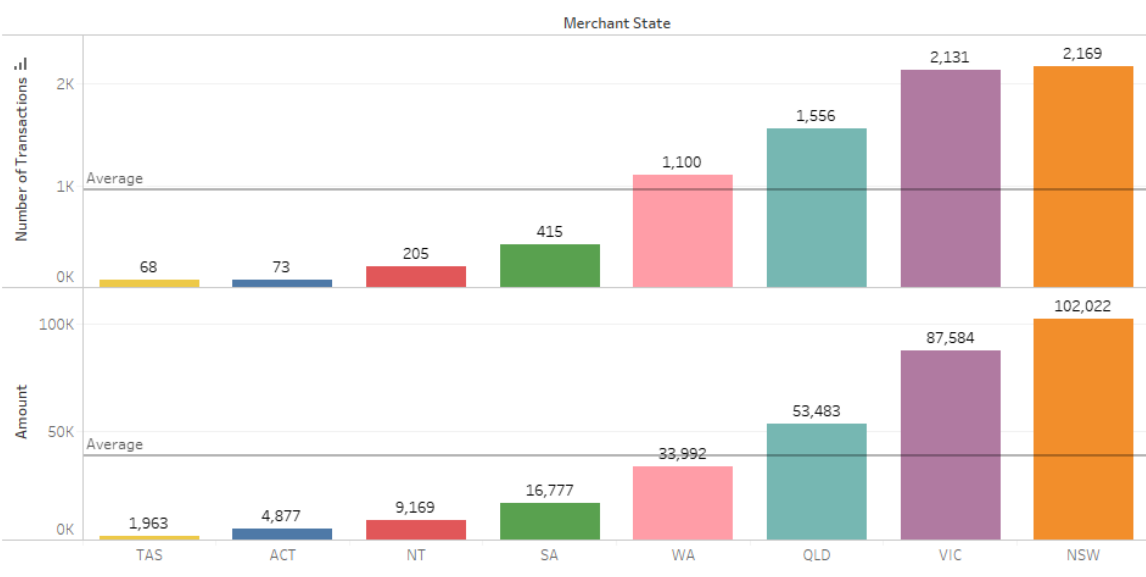
DEMOGRAPHIC INSIGHTS

Available at <https://public.tableau.com/profile/gaston.tavara#!/vizhome/EDA-ANZtransactionDS/DemographicsAnalysis>

Geo Merchant Distribution per State



Transaction & Amount Volume per State



Transaction Type per Merchant State

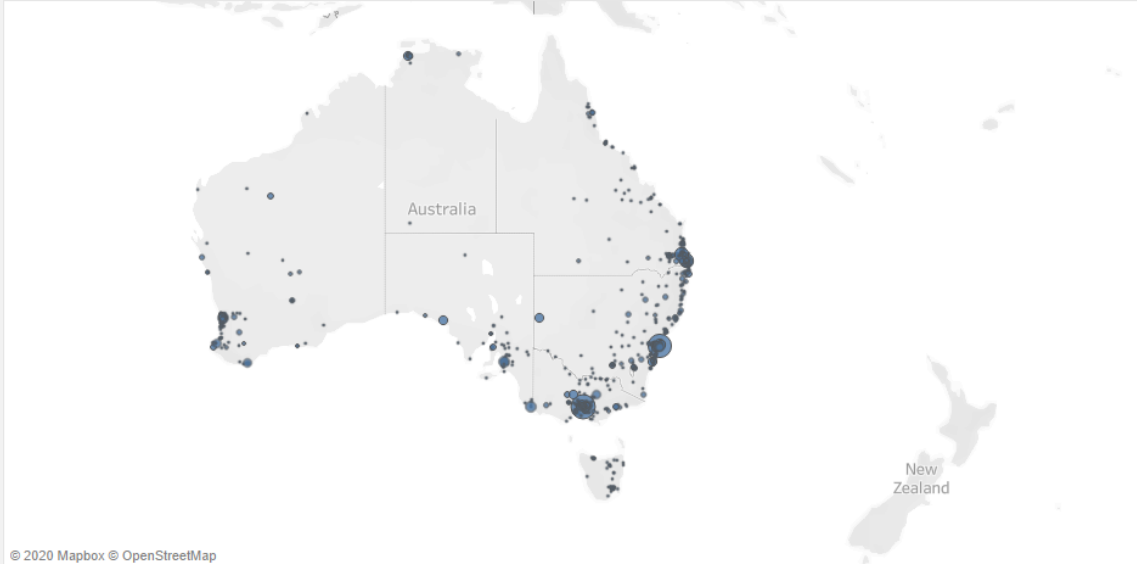
| Transaction Type | Null | Merchant State | | | | | | | |
|------------------|---------|----------------|--------|-------|--------|-------|-------|--------|--------|
| | | ACT | NSW | NT | QLD | SA | TAS | VIC | WA |
| INTER BANK | 100.00% | | | | | | | | |
| PAY/SALARY | 100.00% | | | | | | | | |
| PAYMENT | 100.00% | | | | | | | | |
| PHONE BANK | 100.00% | | | | | | | | |
| POS | | 0.79% | 28.42% | 2.91% | 19.93% | 5.37% | 0.69% | 27.62% | 14.27% |
| SALES-POS | | 1.09% | 27.81% | 2.41% | 20.39% | 5.39% | 1.07% | 27.61% | 14.23% |

- New South Wales and Victoria are the states with the highest number of transactions, which at the same time have the biggest transaction amounts.
- Point of Sale (POS and Sales-Pos) is the only transaction type that can be tracked by Merchant State.
- The bank should consider targeting médium-sized cities in states as Western Australia which has the average number of Transactions.

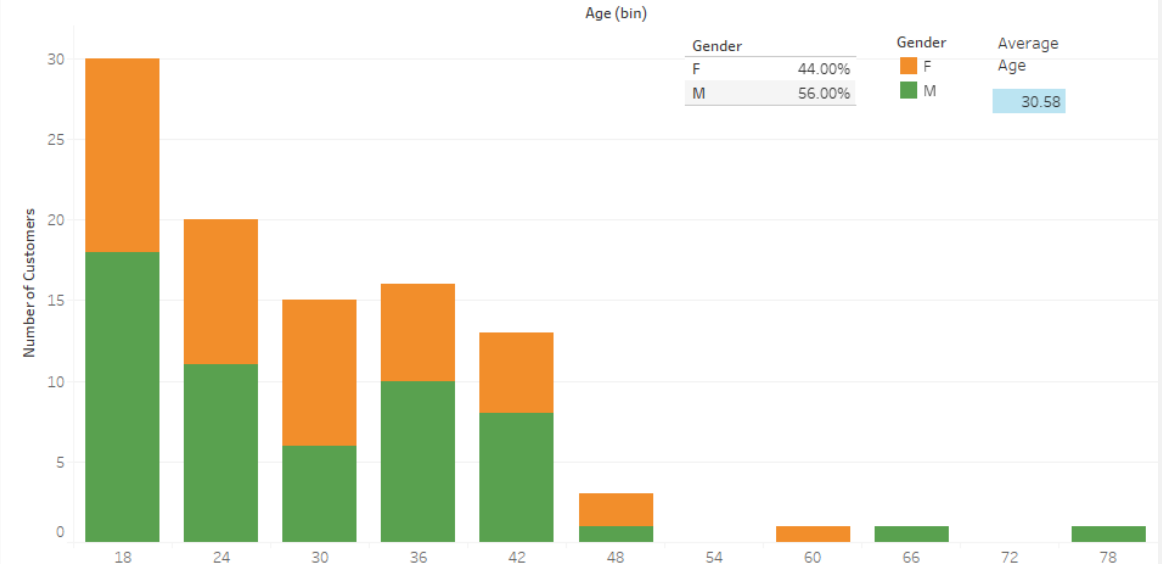
DEMOGRAPHIC INSIGHTS

Available at <https://public.tableau.com/profile/gaston.tavara#!/vizhome/EDA-ANZtransactionDS/DemographicsAnalysis>

Geo Merchant Suburb Distribution in: All



Age and Gender Distribution



- There are less female customers compared to male customers, but the difference is not huge, we can say there is a healthy distribution.
- The bank is more popular amongst younger customers (less than 40 years old). Lacking in the middle-age and elderly customers.
- Average Age is around 31 years old.
- The bank has a strong presence on largest cities in the East Side. The bank should consider expanding operations in those areas.

INSIGHTS SUMMARY

Analysis Summary



Analysis on the Amount Field over months, days and hours.

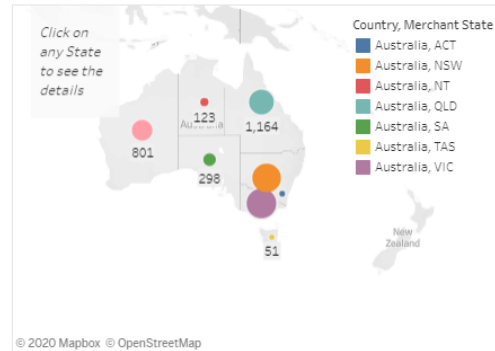
Analysis of Transaction volume over dates, months and per Transaction type.



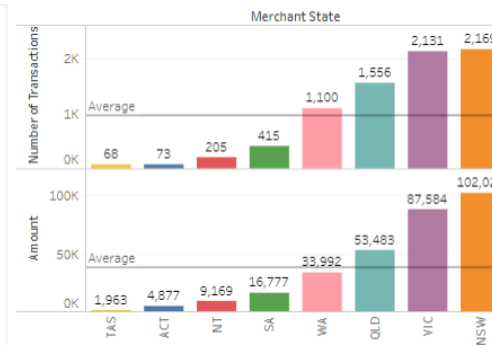
Demographic analysis over Australia



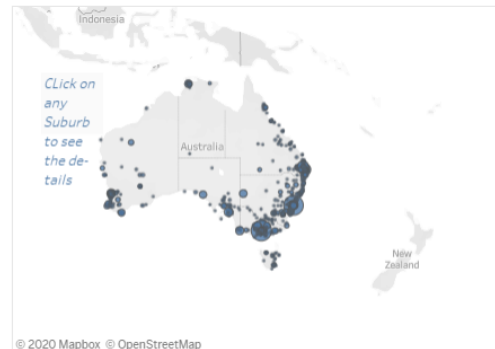
Geo Merchant Distribution per State



Transaction & Amount Volume per State



Geo Merchant Suburb Distribution in: All



Age and Gender Distribution

