

Exploratory Data Analysis on ANZ Transaction Dataset

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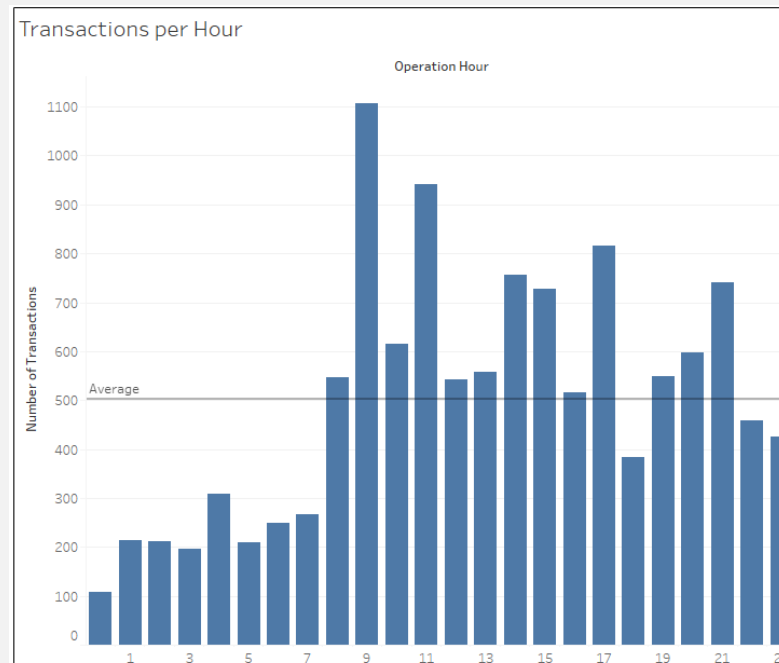
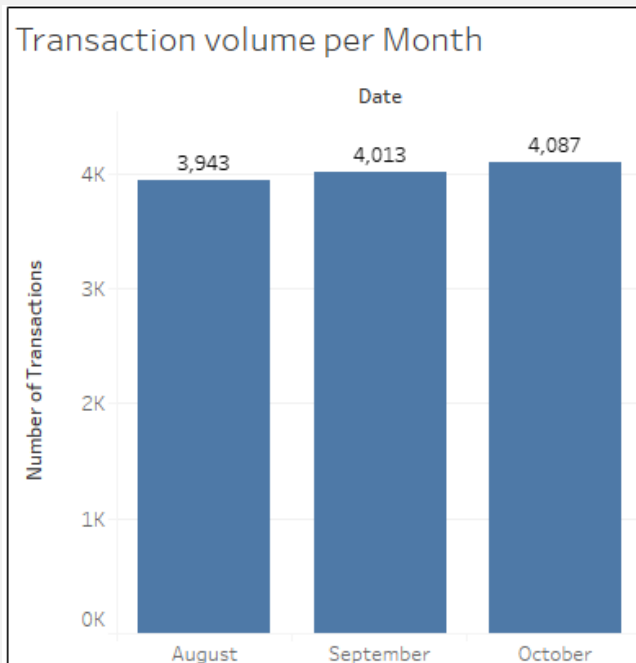
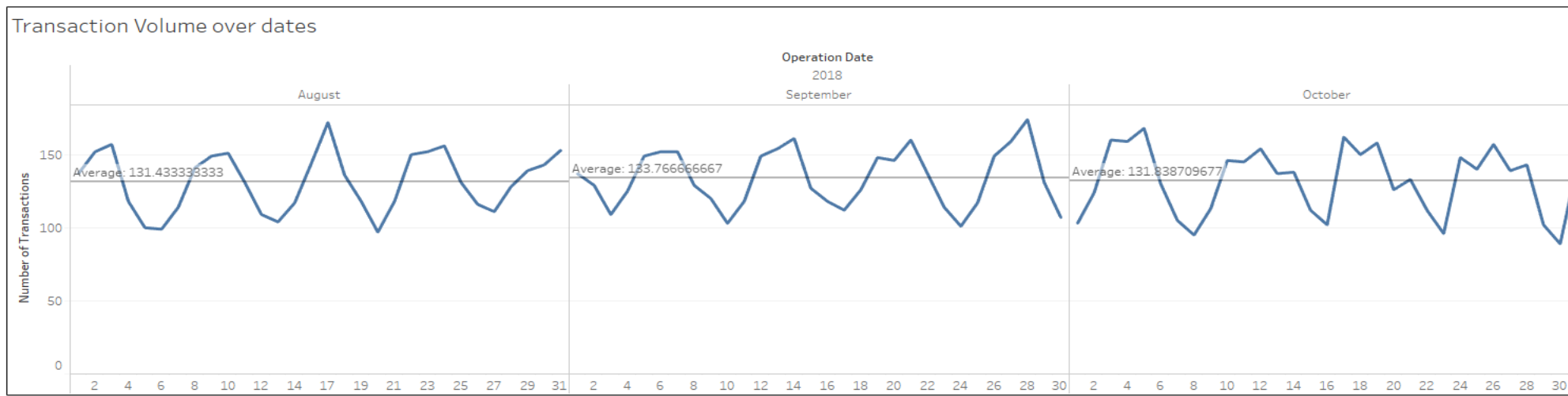
DETAILS ON DATA

- 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

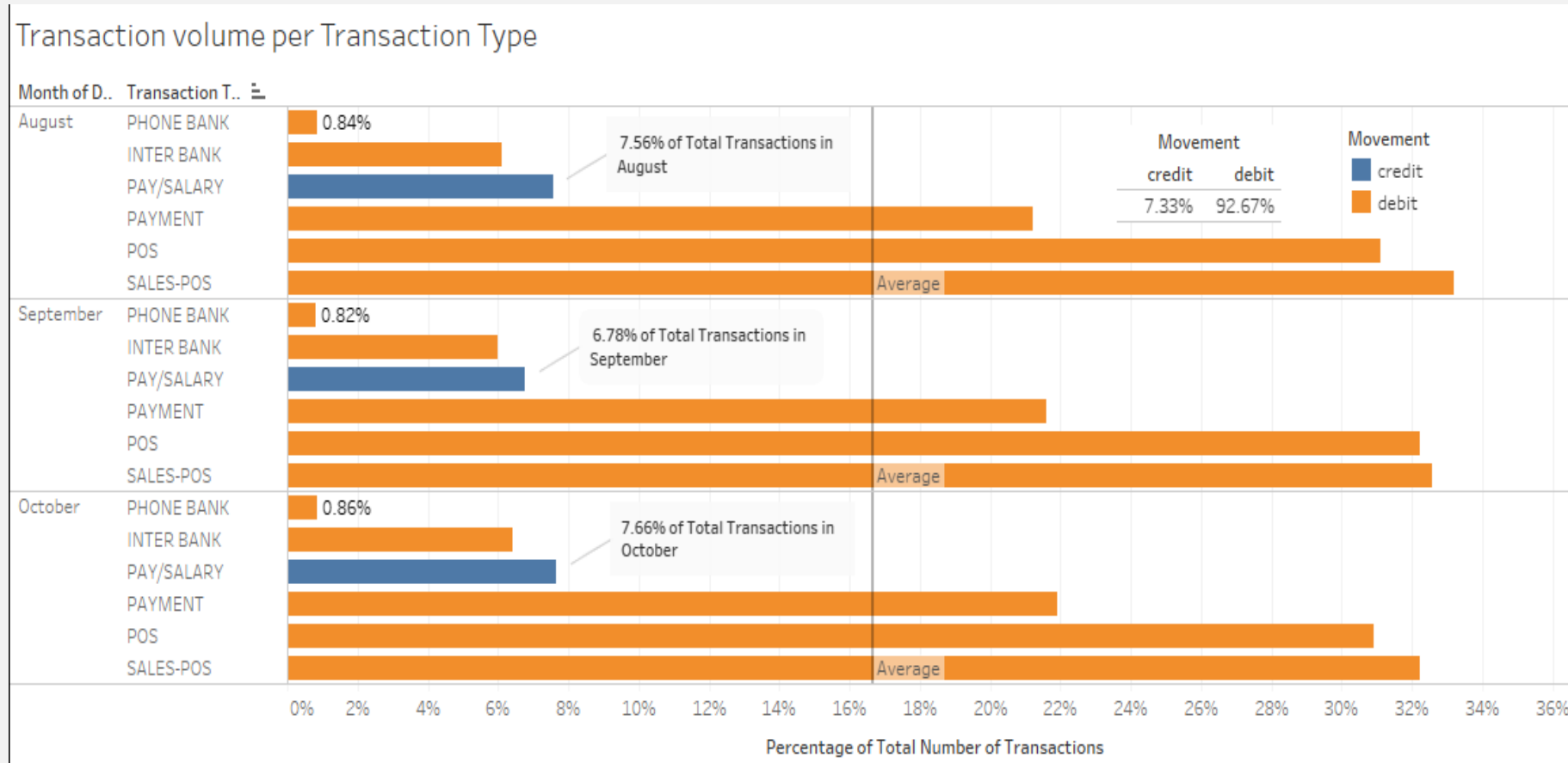
Available at <https://public.tableau.com/profile/gaston.tavara#!/vizhome/EDA-ANZtransactionDS/TransactionAnalysis>



- 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

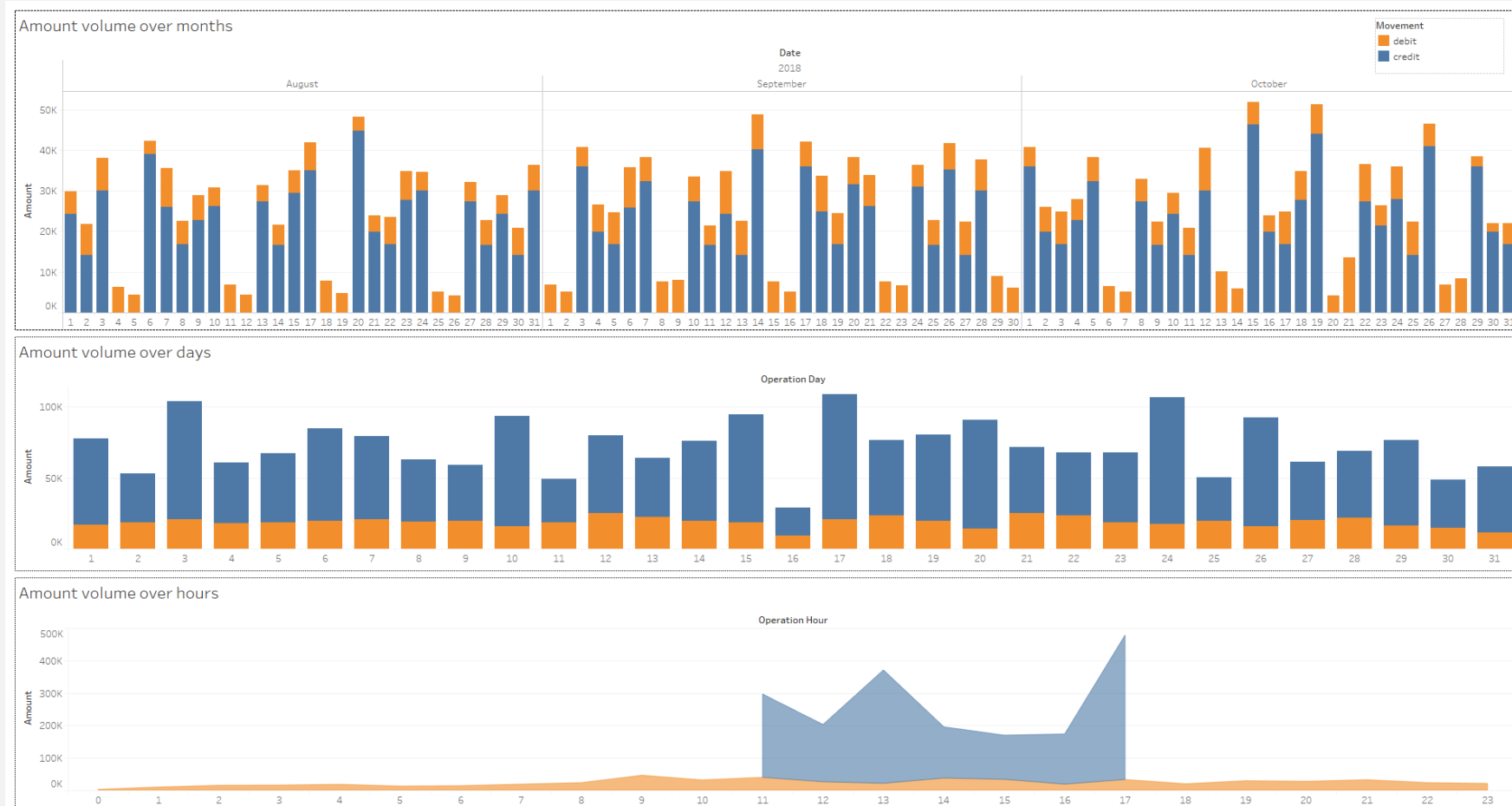
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- The Transaction type distribution is very similar in each month. Three of them are consistently common each month: Sales-Pos, Pos, and Payment.
- The bank might consider removing Phone Banking operations as it represents less than 1% of transactions 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>

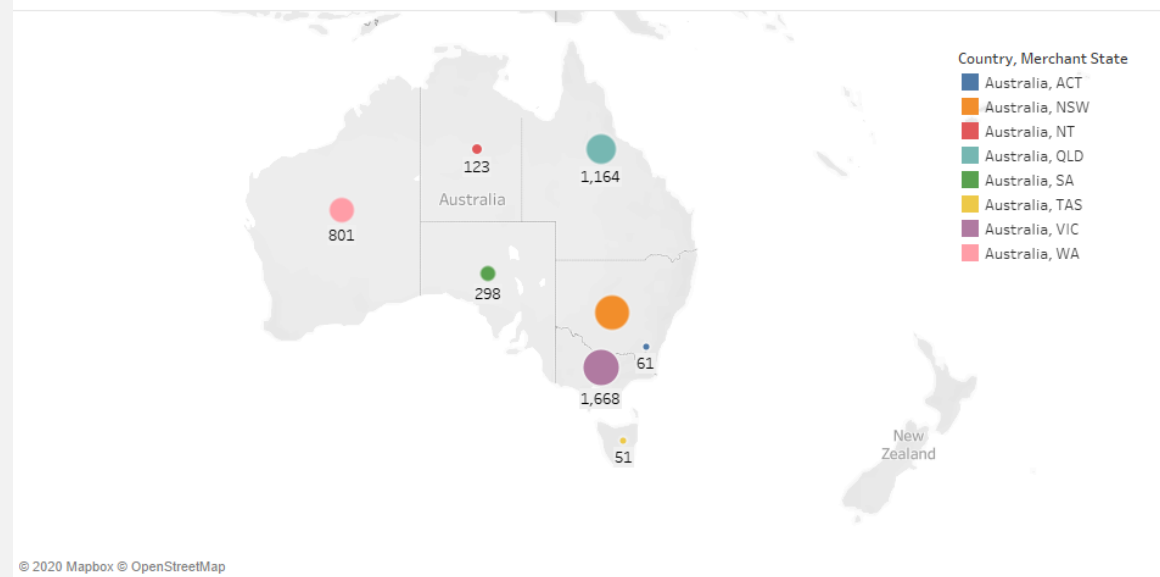


- Even though credit transactions are less than debit transactions(analyzed on previous slide), it represents a bigger amount value transaction.
- There are no credit movements on weekends.
- Credit transactions only occur from 11am to 5pm.
- There is an outlier on Day 16, probably due to missing data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

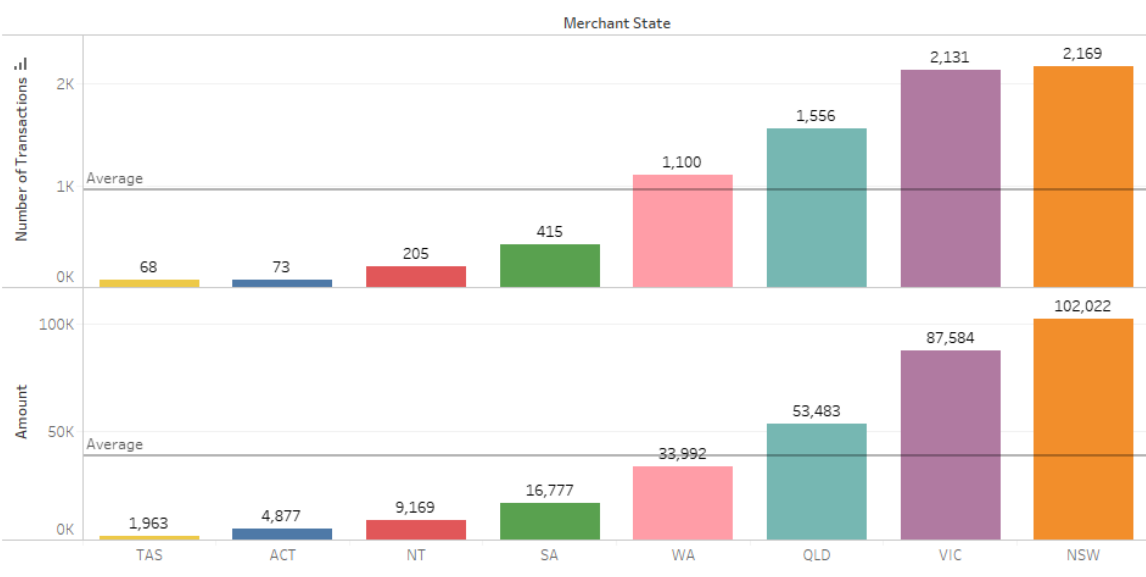
DEMOGRAPHICS INSIGHTS

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

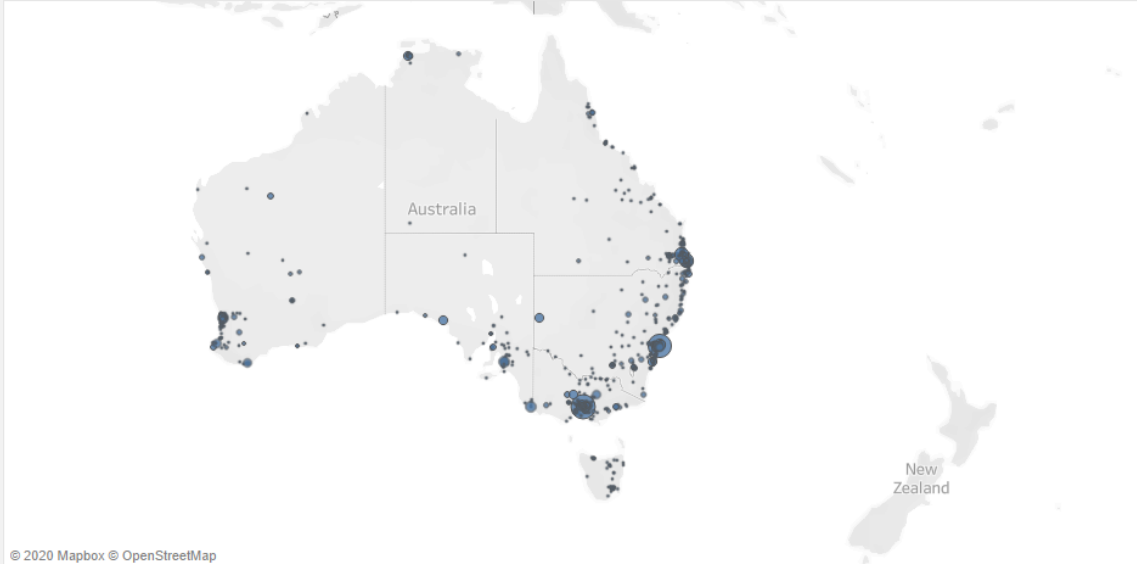
Transaction Type	Null	Merchant State							
		ACT	NSW	NT	QLD	SA	TAS	VIC	WA
INTER BANK	100.00%								
PAY/SALARY	100.00%								
PAYMENT	100.00%								
PHONE BANK	100.00%								
POS		0.79%	28.42%	2.91%	19.93%	5.37%	0.69%	27.62%	14.27%
SALES-POS		1.09%	27.81%	2.41%	20.39%	5.39%	1.07%	27.61%	14.23%

- 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.

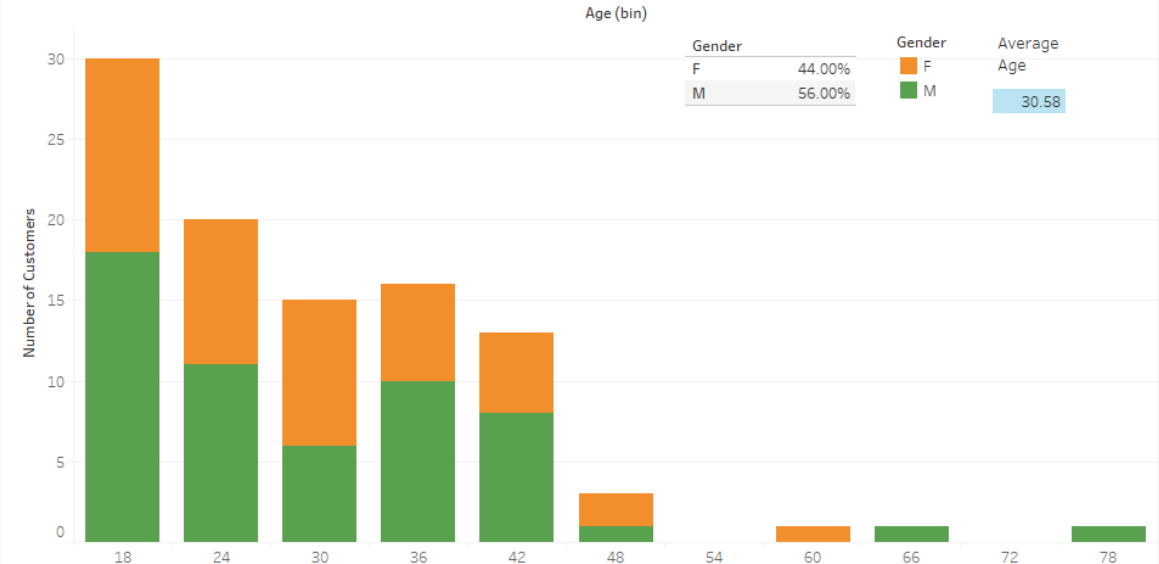
DEMOGRAPHICS INSIGHTS

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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.