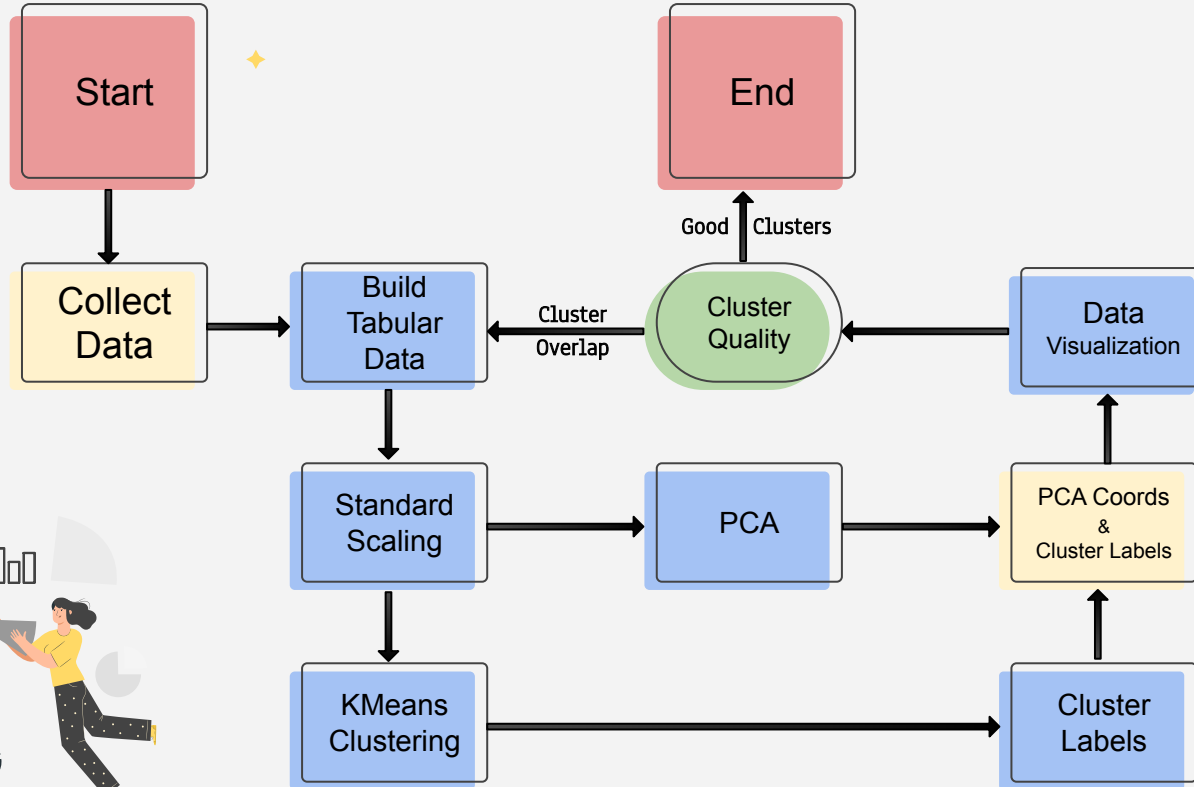


MINI PROJECT III FINANCIAL TRANSACTIONS

Lawrence Young & Robyn Mundle

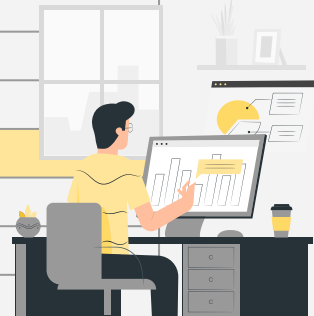


FLOW OF ANALYSIS



CUSTOMER DEMOGRAPHICS FEATURES

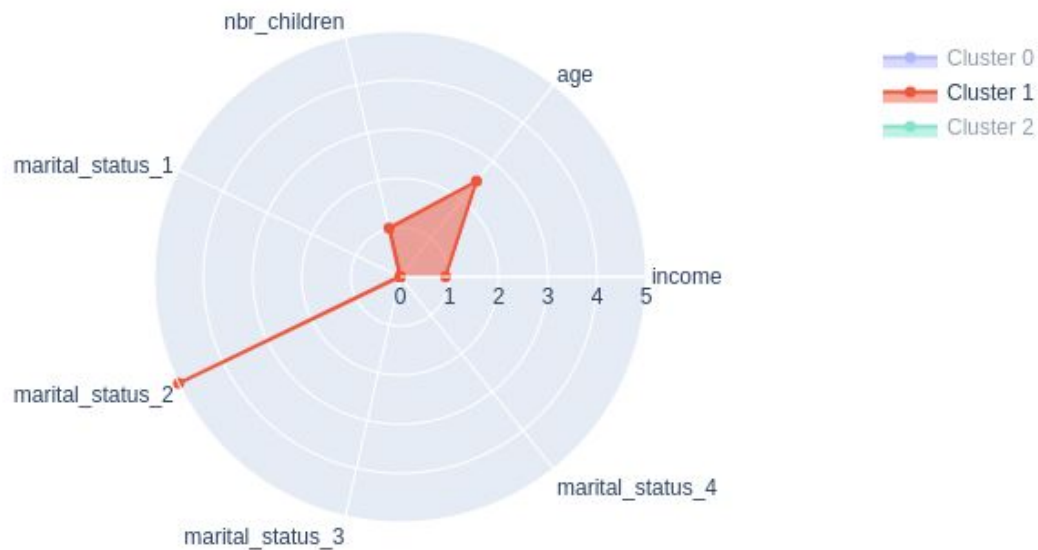
	TWM_Customer Features	Feature Details	Feature Engineering / Modifications
1	cust_id	Unique ID per customer	
2	income	Income	
3	age	Age in years	
4	years_with_bank	Account's years with bank	
5	nbr_children	Customer's number of children	
6	gender	Gender	
7	marital_status	Numeric ID for Marital Status	Split into new columns
8	name_prefix	Preferred name prefix	
9	first_name	Customer's first name	
10	last_name	Customer's last name	
11	street_nbr	Address: street number	
12	street_name	Address: street name	
13	postal_code	Address: ZIP code	
14	city_name	Address: City name	
15	state_code	Address: State Code	



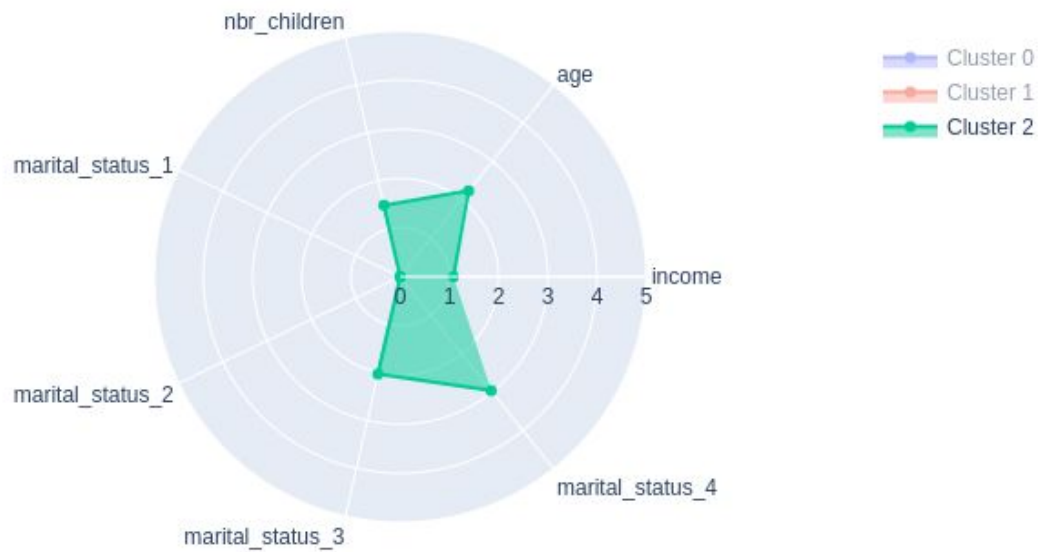
CUSTOMER DEMOGRAPHICS RADAR



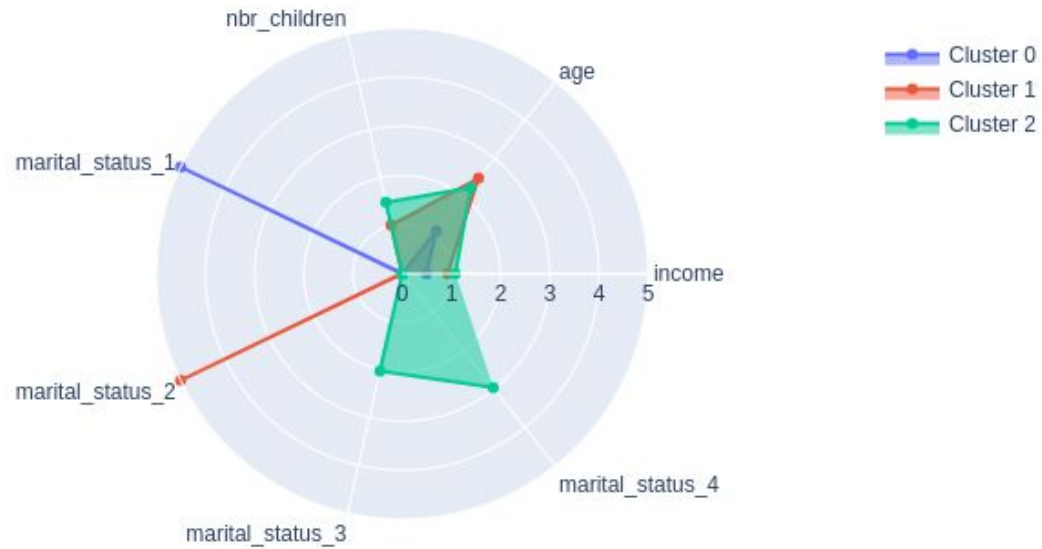
CUSTOMER DEMOGRAPHICS RADAR



CUSTOMER DEMOGRAPHICS RADAR



CUSTOMER DEMOGRAPHICS RADAR



BANKING BEHAVIOUR FEATURES

twm_savings_acct
cust_id
acct_nbr
minimum_balance
acct_type
account_active
acct_start_date
acct_end_date
starting_balance
ending_balance

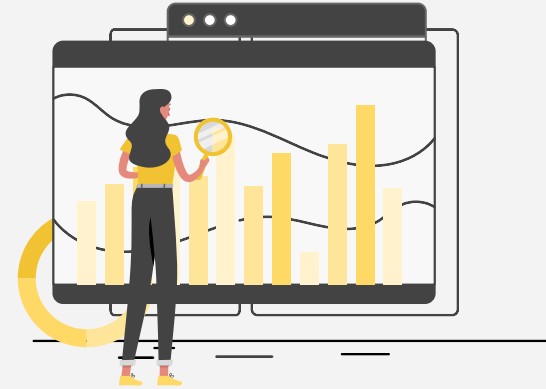
= Y

} total_saved

twm_credit_acct
cust_id
acct_nbr
credit_limit
credit_rating
account_active
acct_start_date
acct_end_date
starting_balance
ending_balance

= Y

} total_debt



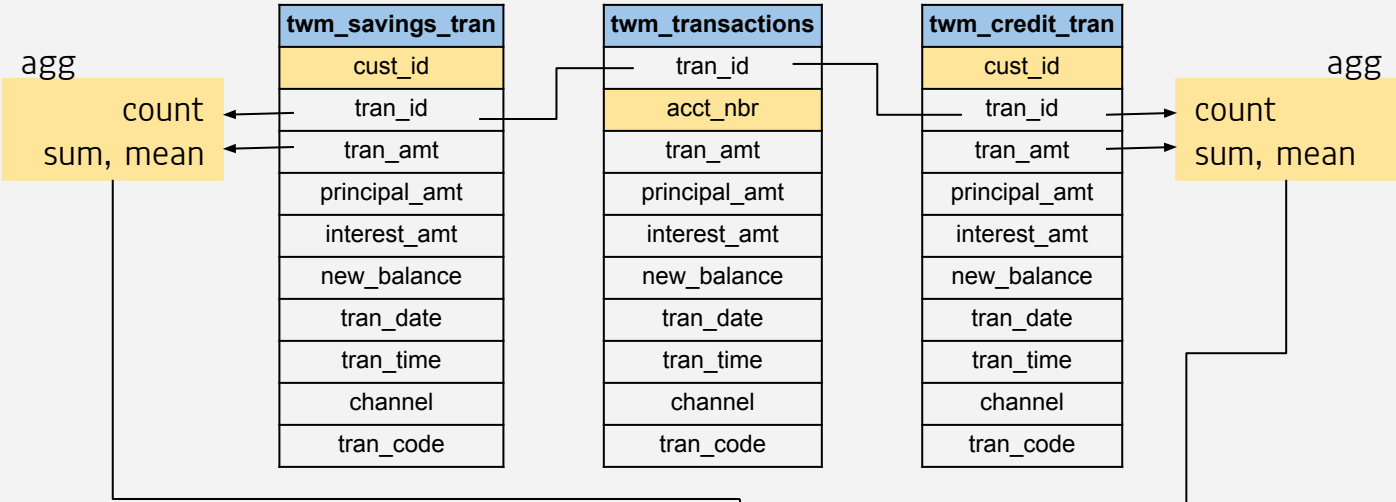
bank_bhv

cust_id	savings_acct	total_saved	credit_acct	total_debt
...



One row per customer

BANKING BEHAVIOUR FEATURES

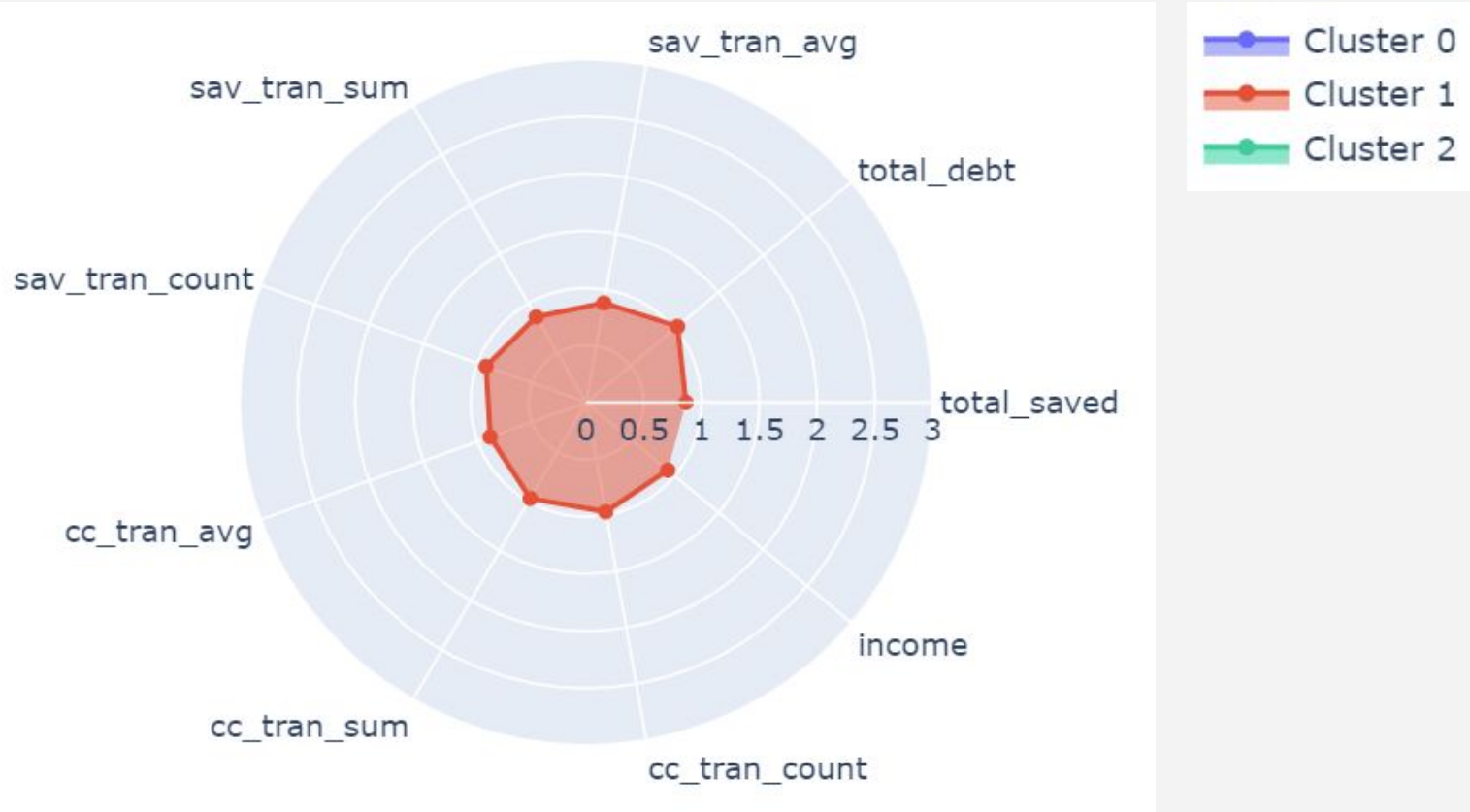
[illegible]

BANK BEHAVIOUR FEATURES

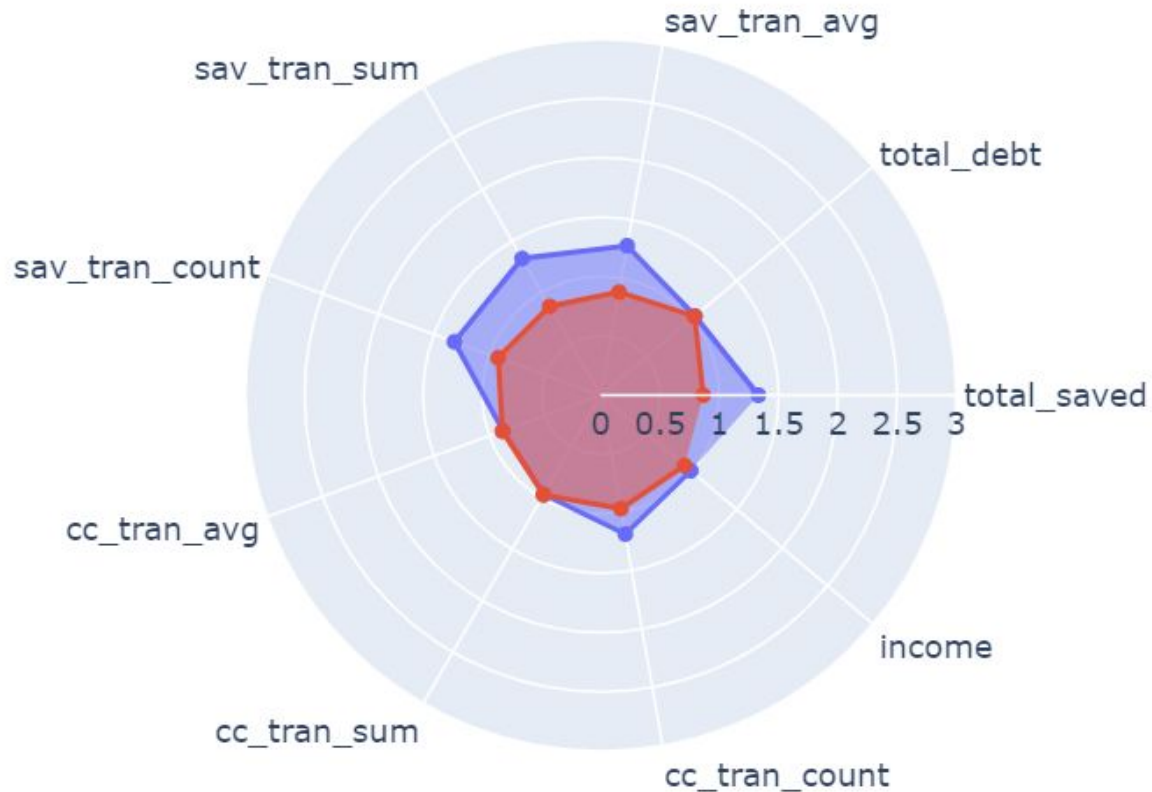
total_ saved	total_ debt	count_ sav_ tran	sum_ sav_ tran	mean_ sav_ tran	count_ cc_ tran	sum_ cc_ tran	mean_ cc_ tran	income
...



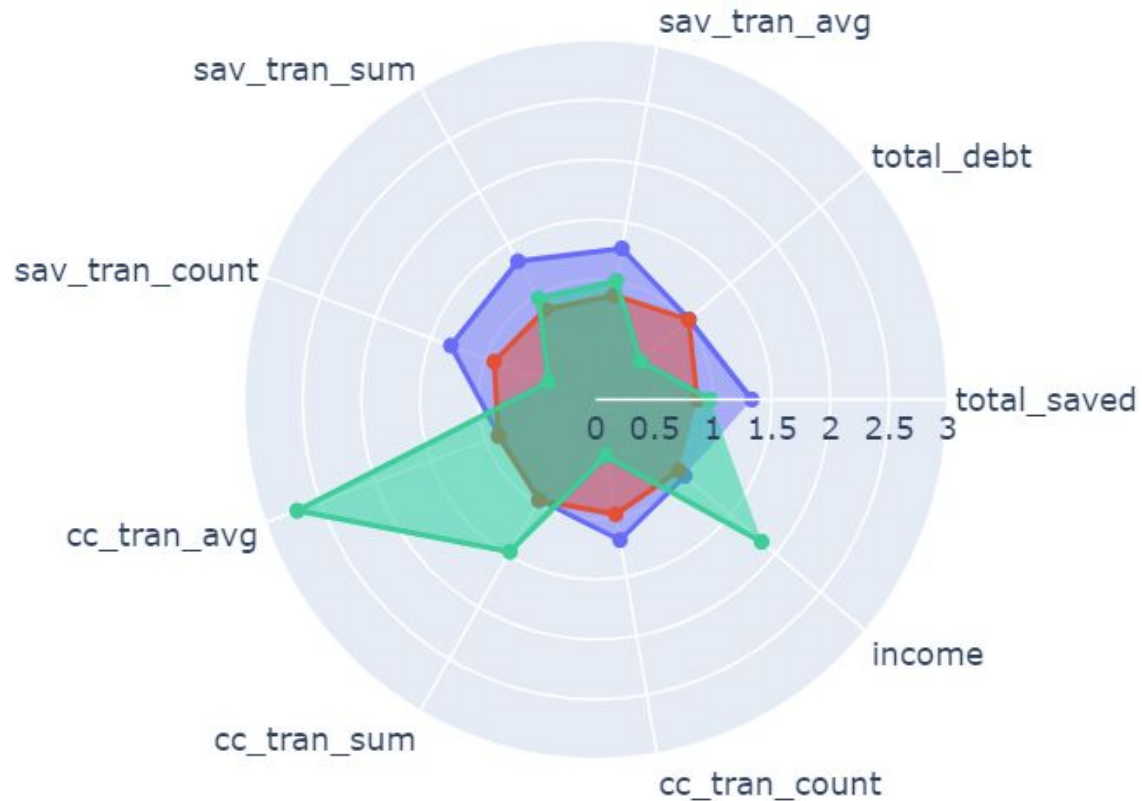
BANKING BEHAVIOUR RADAR



BANKING BEHAVIOUR RADAR

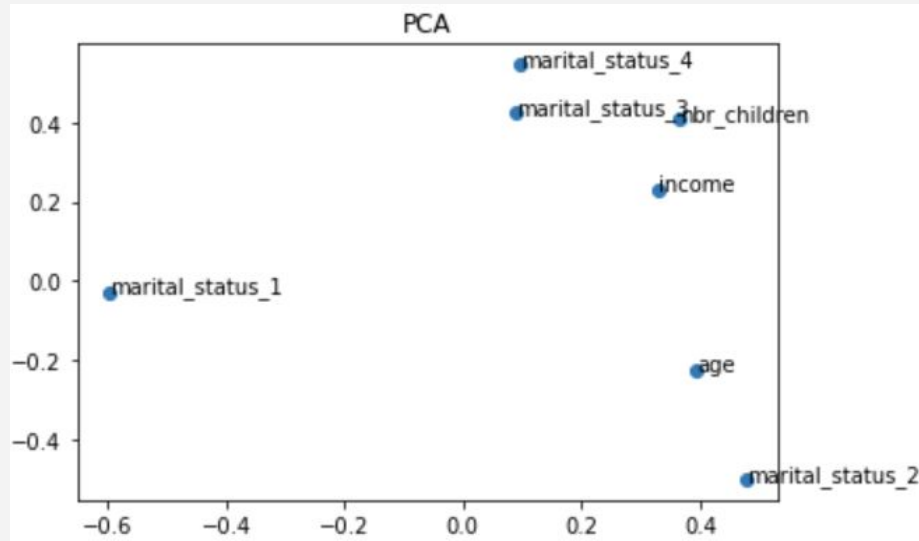


BANKING BEHAVIOUR RADAR

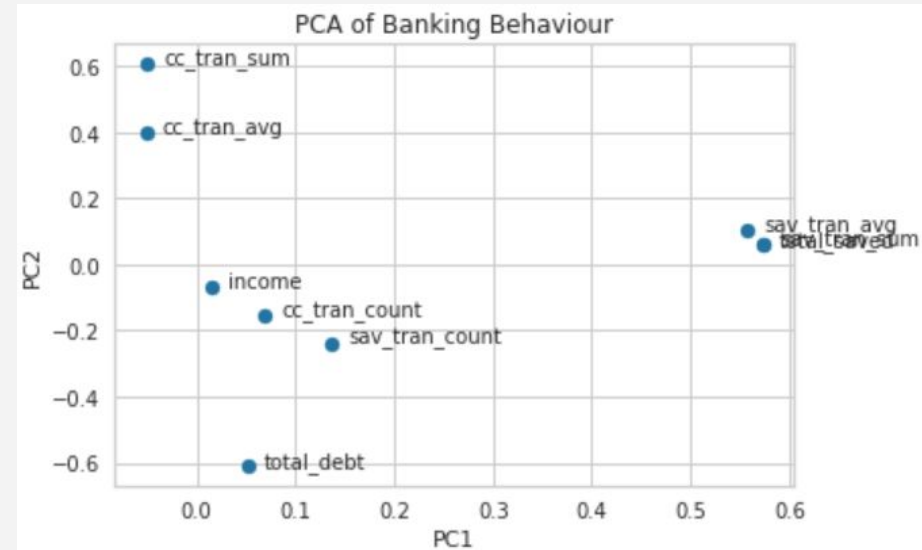


PCA 2-COMPONENT REDUCTION

CUSTOMER DEMOGRAPHICS

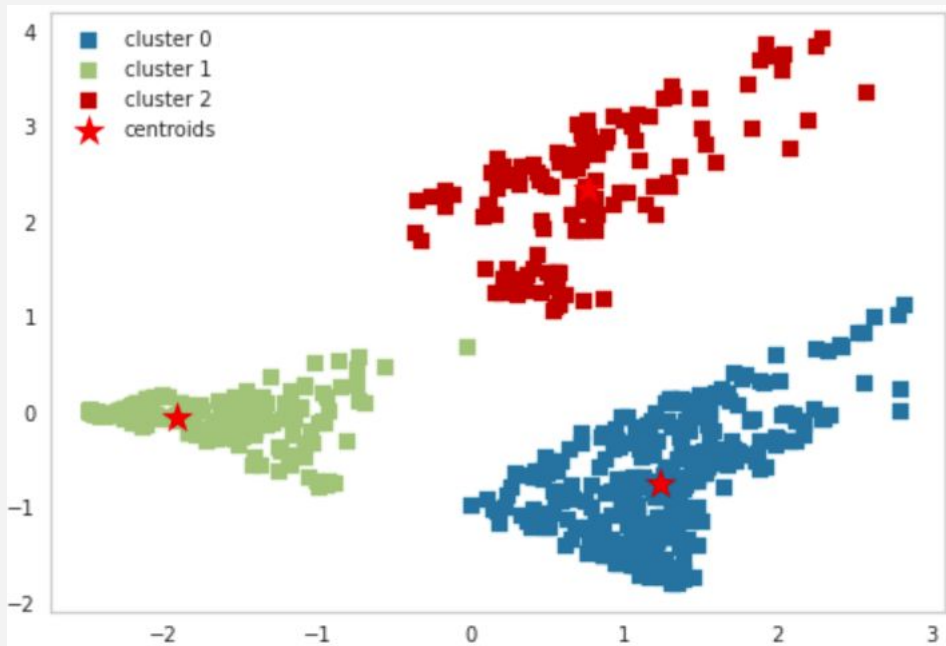


BANKING BEHAVIOUR

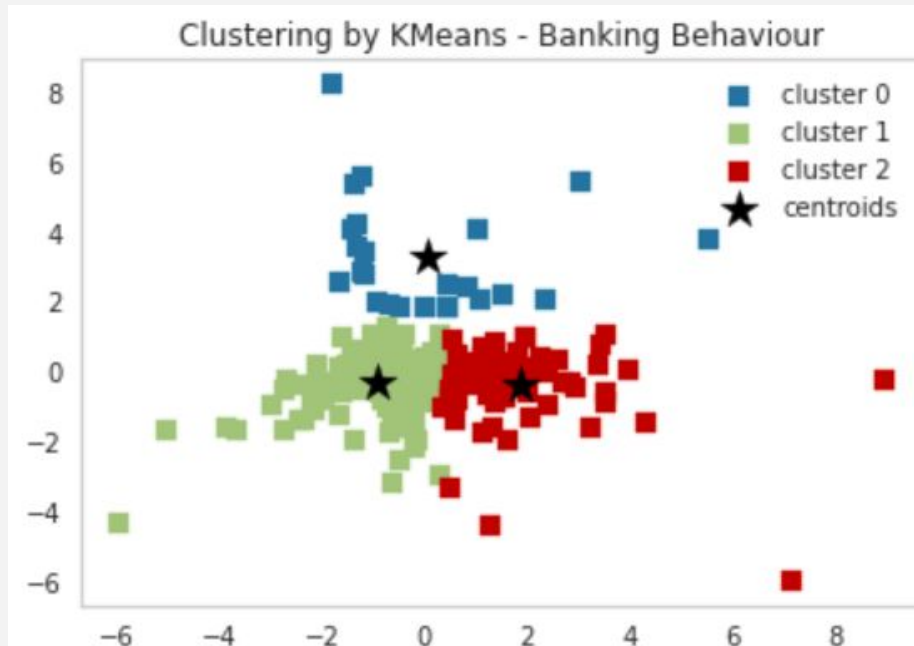


PCA 2-COMPONENT REDUCTION

CUSTOMER DEMOGRAPHICS

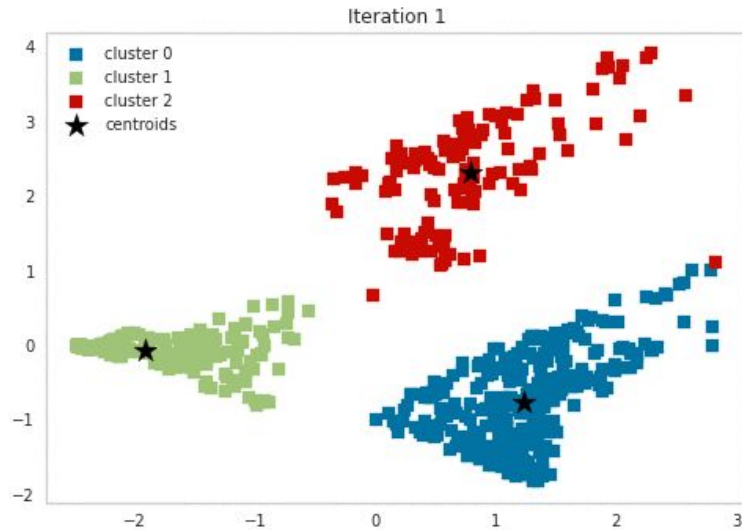


BANKING BEHAVIOUR

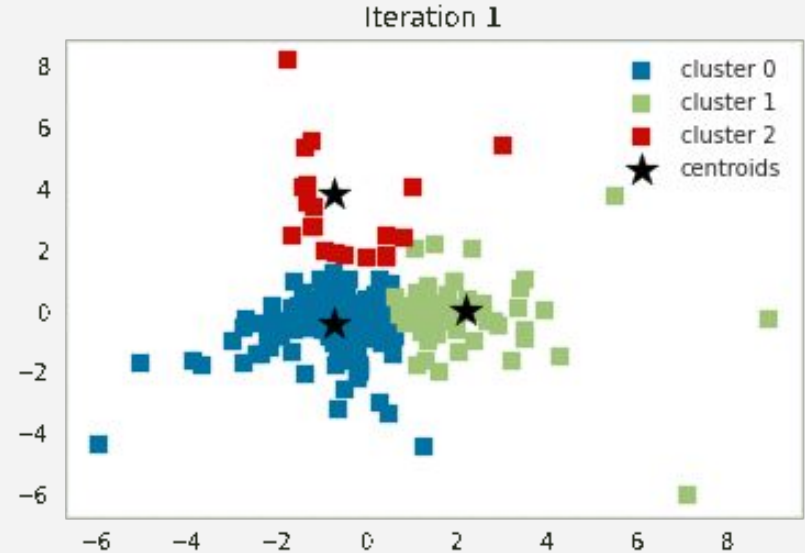


KMEANS ITERATIONS

CUSTOMER DEMOGRAPHIC CLUSTERING

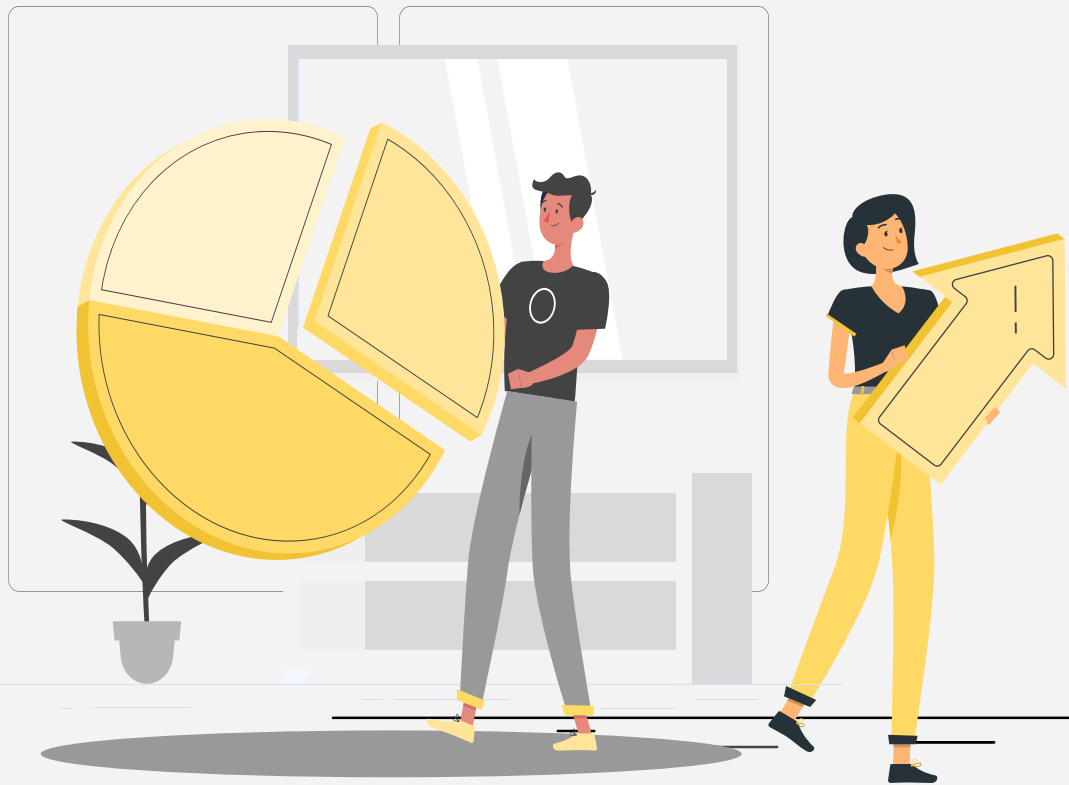


BANK BEHAVIOUR CLUSTERING



THANKS

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BANKING BEHAVIOUR FEATURES

twm_customer
cust_id
income
age
years_with_bank
nbr_children
gender
marital_status
name_prefix
first_name
last_name
street_nbr
street_name
postal_code
city_name
state_code

twm_accounts
acct_nbr
cust_id
acct_type
account_active
acct_start_date
acct_end_date
starting_balance
ending_balance

twm_savings_tran
cust_id
tran_id
tran_amt
principal_amt
interest_amt
new_balance
tran_date
tran_time
channel
tran_code

twm_checking_acct
cust_id
acct_nbr
minimum_balance
per_check_fee
account_active
acct_start_date
acct_end_date
starting_balance
ending_balance

twm_savings_acct
cust_id
acct_nbr
minimum_balance
acct_type
account_active
acct_start_date
acct_end_date
starting_balance
ending_balance

twm_checking_tran
cust_id
tran_id
tran_amt
principal_amt
interest_amt
new_balance
tran_date
tran_time
channel
tran_code

twm_credit_acct
cust_id
acct_nbr
credit_limit
credit_rating
account_active
acct_start_date
acct_end_date
starting_balance
ending_balance

twm_credit_tran
cust_id
tran_id
tran_amt
principal_amt
interest_amt
new_balance
tran_date
tran_time
channel
tran_code

twm_transactions
tran_id
acct_nbr
tran_amt
principal_amt
interest_amt
new_balance
tran_date
tran_time
channel
tran_code



BANKING BEHAVIOUR FEATURES

twm_savings_acct
cust_id
acct_nbr
minimum_balance
acct_type
account_active
acct_start_date
acct_end_date
starting_balance
ending_balance

}

total_saved

Bank_bhv

cust_id	savings_acct	total_saved
...