

DATA VISUALIZATION USING TABLEAU

CAR CLAIM INSURANCE ANALYSIS

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PROJECT OBJECTIVE :

To explore the pattern of claims present in car claim insurance dataset which would help the companies to frame different types of policies for the users providing better benefits and increasing the premium to the company.

DATA DICTIONARY :

Assumption	Car Owner and Driver are same Amounts are in Dollars (\$)
ID	Identification Variable
KIDSDRIV	Number of teenagers among the car owner's children who can drive a car.
BIRTH	Date of birth of the driver
HOMEKIDS	No of children the car owner has
YOJ	Years on Job. How many years has the owner of the car been working?
INCOME	Income of the driver
PARENT1	Is the car owner a Single Parent
HOME_VAL	Value of the house owned by the car owner
MSTATUS	Marital status of the car owner
GENDER	Gender of the driver
EDUCATION	Maximum Education level of the driver
OCCUPATION	Occupation of the driver
TRAVTIME	Time taken to get to work on an average
CAR_USE	Purpose of using the car
BLUEBOOK	What is the worth of the car. Value of the Vehicle(in dollars)
CAR_TYPE	Car type
OLDCLAIM	Total claim (in past 5 years - in dollars)
CLM_FREQ	Number of claims (in past 5 years)
CLM_AMT	If car was in a crash, what is the currently claimed amount(in dollars)
CAR_AGE	Age of car
URBANICITY	Where the car is being driven primarily

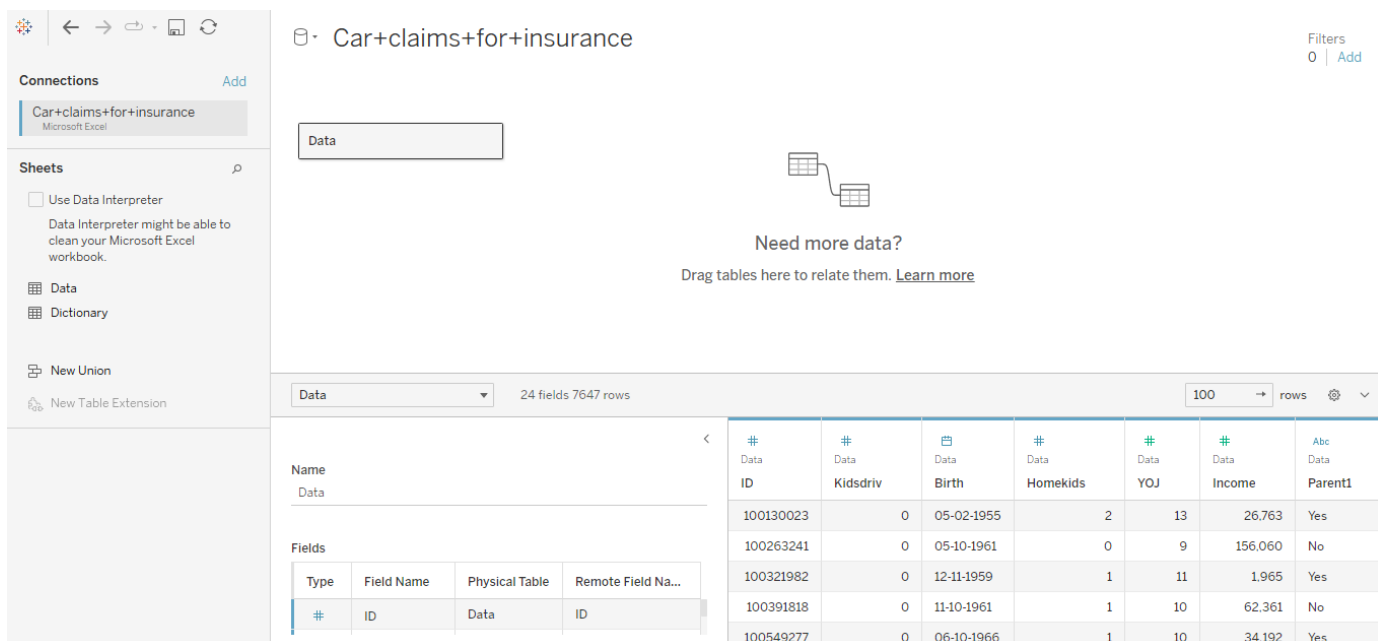
DATA SUMMARY :

- The dataset has data on 7647 client's car insurance information, it includes the customer demographic information (birthdate, income, value of house owned, marital status, gender, education level, occupation, travel time.), the insurance claim information (worth of car, claim amount, claim frequency, age of car etc.
- The dataset contains 7647 Rows and 21 columns .

URL :

https://public.tableau.com/app/profile/abinaya.m8348/viz/car_ins/Story1

IMPORT DATASET INTO TABLEAU :



The screenshot shows the Tableau interface with the 'Car+claims+for+insurance' dataset loaded. The 'Connections' pane on the left shows the data source as 'Microsoft Excel'. The 'Sheets' pane shows the 'Data' sheet selected. The main view displays the 'Data' tab with 24 fields and 7647 rows. A preview of the data is shown at the bottom right.

#	#	#	#	#	#	Abc
Data	Data	Data	Data	Data	Data	Data
ID	Kidsdriv	Birth	Homekids	YOJ	Income	Parent1
100130023	0	05-02-1955	2	13	26,763	Yes
100263241	0	05-10-1961	0	9	156,060	No
100321982	0	12-11-1959	1	11	1,965	Yes
100391818	0	11-10-1961	1	10	62,361	No
100549277	0	06-10-1966	1	10	34,192	Yes

View Data: Dictionary ×		
Tables	Dictionary 21 rows 2 fields	
Dictionary	Abc Dictionary Assumption Car Owner and Driver are same Amounts are in Dollars (\$)	
	ID Identification Variable	
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10,000 → rows	CLM_FREQ	Number of claims (in past 5 years)

CALCULATION FIELD :

AGE :

AGE

$$(today() - [Birth]) / 365$$

The calculation is valid.

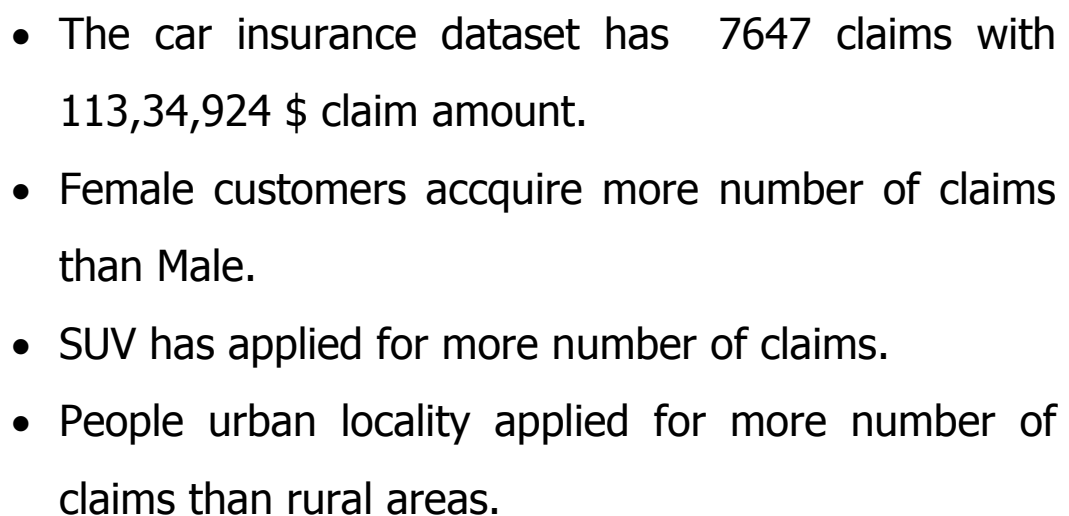
4 Dependencies ▾

Apply

OK

Gender , Birth (range), Occupation, Education , Car type , Car use , Urbanicity has been used in different dashboards.

➤ CLAIM :



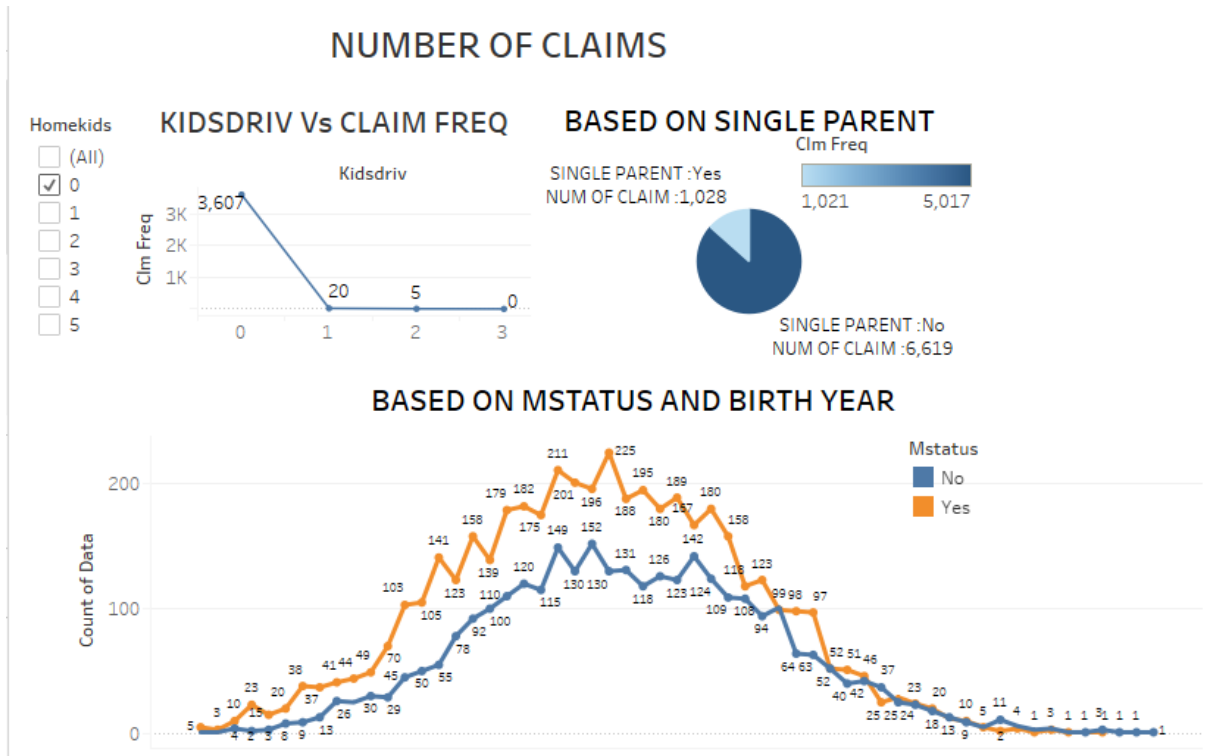
➤ CAR TYPES :

TYPE OF CARS AND THEIR OLD CLAIM & CLAIM AMOUNT



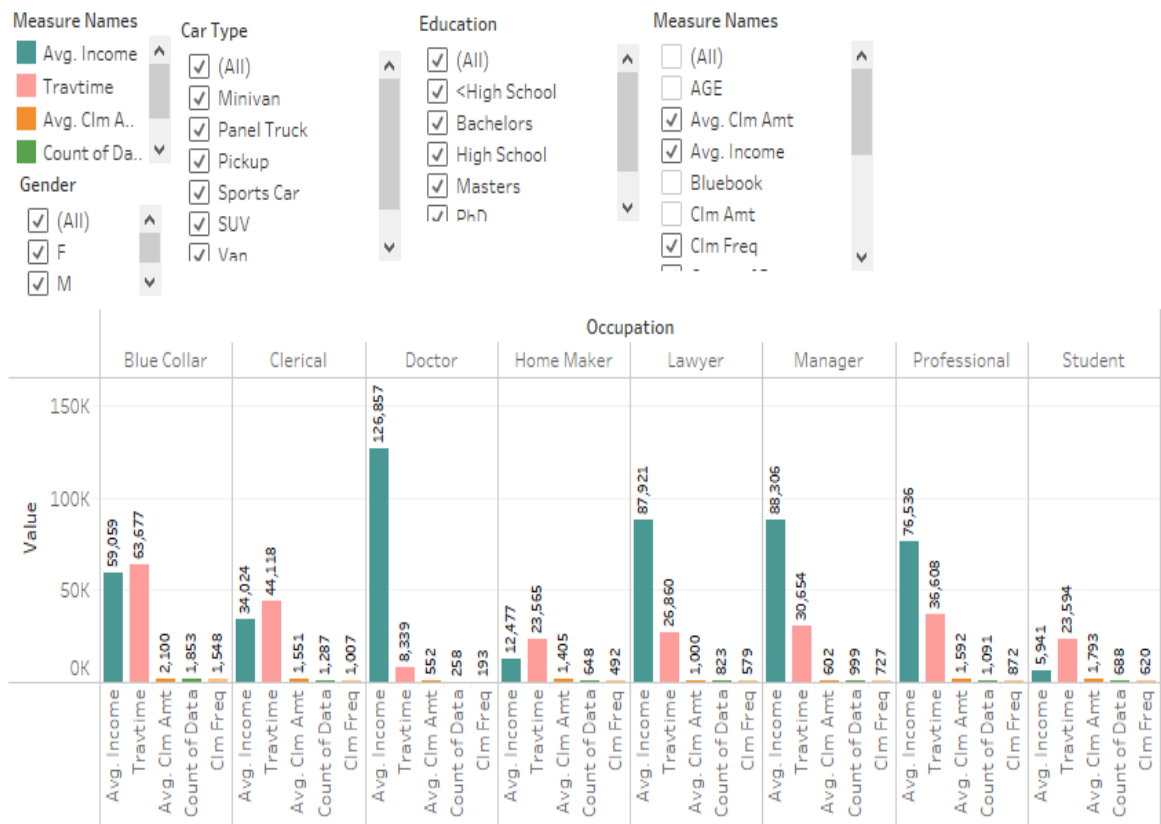
- Number of SUVs applied for claim is more than others.
- Here Car Use (commercial or private) is used as filter .
- For commercial use , Pickup claimed more
- For Private use , SUV claimed more .
- SUV has also acquire more old claim and claim amount.
- Male prefer MINIVAN
- Females prefer SUV.

➤ CLAIM FREQ :



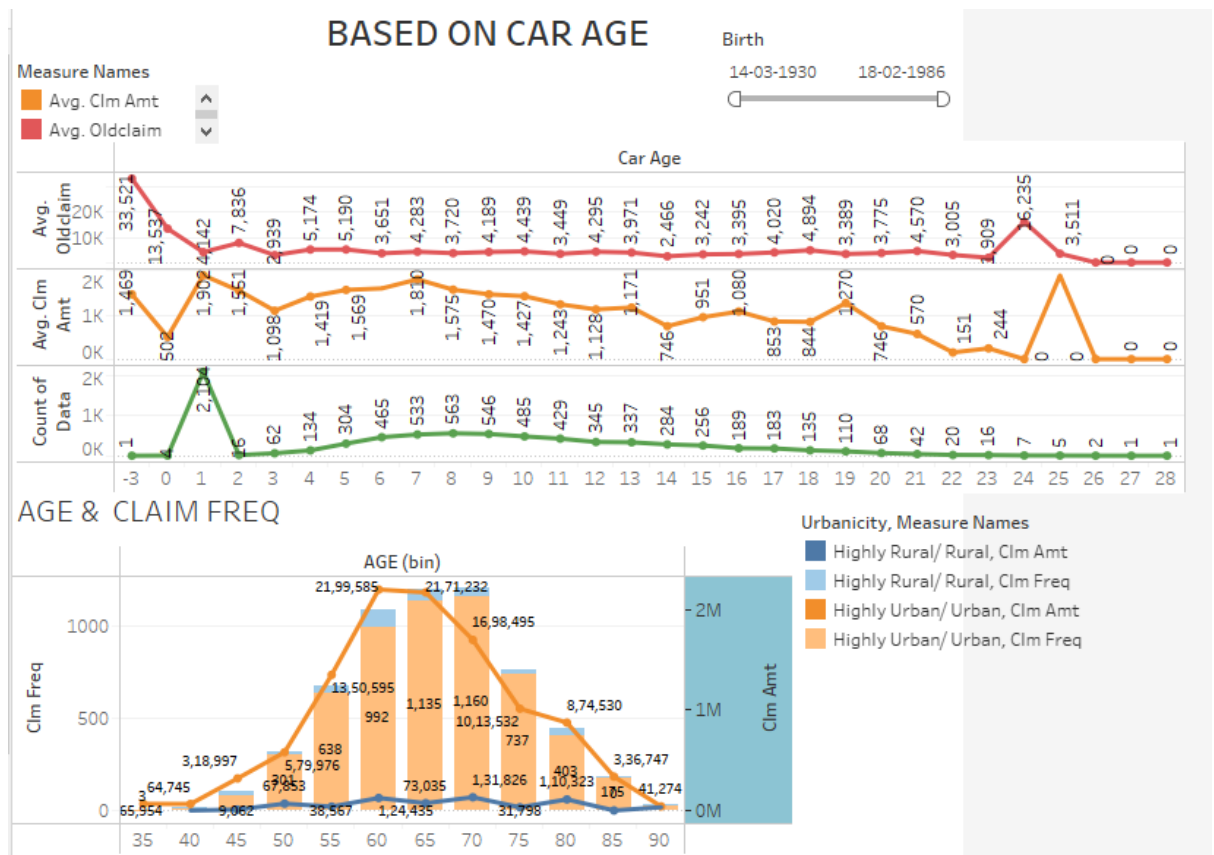
- Claim freq is high among person has
 - No kids at home
 - No kids Driver
 - Not a single parent
- Number of claims (225) is high among married person who are born in 1954 (age : 69).
- Here Home kids and claim freq has been used as Filters.
- Line plot and pie chat has been used here.
- Claim rate decreased when age increases after 1954

➤ OCCUPATION :



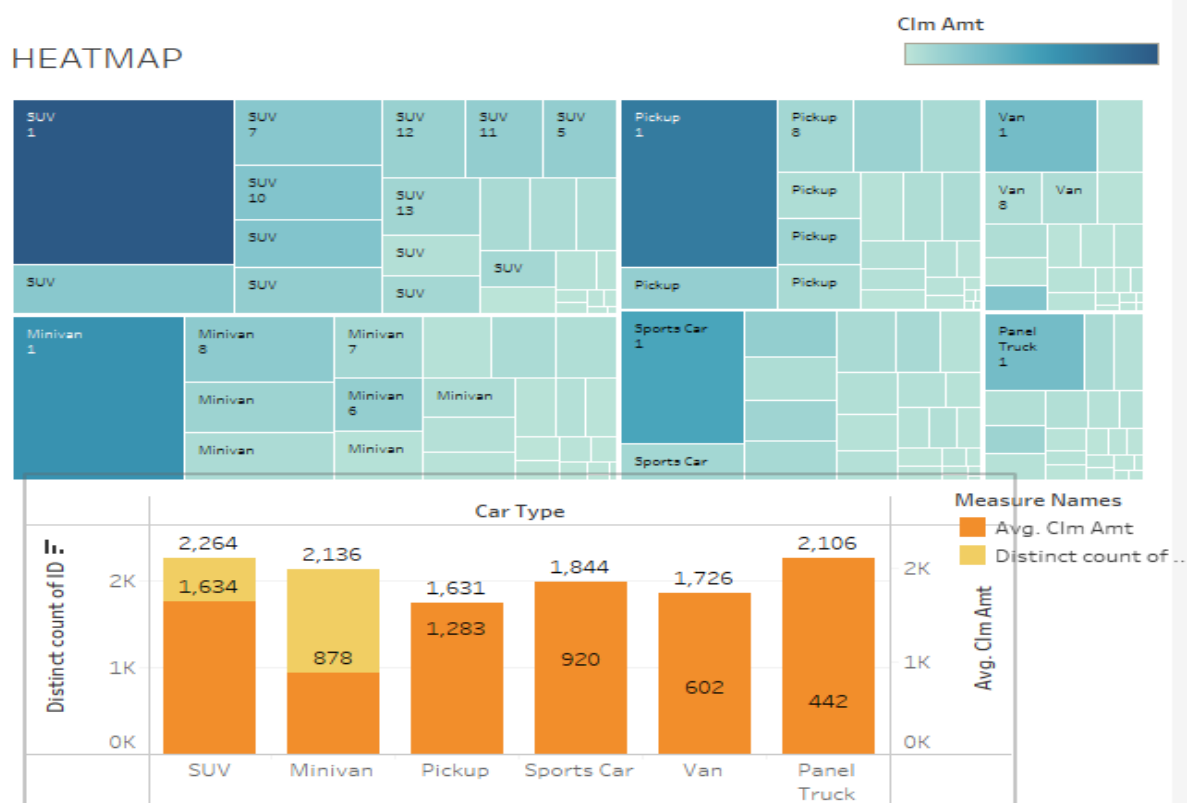
- 229 BLUE COLLAR job person who has HIGH SCHOOL as educational qualification and drive SUV Car have higher claim freq rate(188).
- AVG Income of DOCTOR is higher among others but their claim rate is LOW.
- Gender , car type , Education , Measure values such as income, claim freq etc has been used as filters.
- Blue collar job persons who are claimed insurance are higher than others.

➤ CAR AGE:



- CAR AGE = 1 has more number of claims (2104) and highest avg claim amount (\$ 1902).
- Number of claims decreased when car age increased.
- Drivers in the AGE GROUP of 60 to 65 belong to URBAN areas have high claim freq rate (1160) whereas drivers between 55 to 60 belong to RURAL areas have high claim freq rate (100) when compared to other rural areas.
- Here PARETO chart , line plot used
- Birth used as filter and Age used as calculated field.

➤ CLAIM AMOUNT :



- SUV whose CAR AGE =1 acquire higher claiming amount followed by PICKUP whose car age = 1 .
- AVG Claim amt for PANEL TRUCK is (\$ 2106) higher than others but its number of claim is less (442)
- SUV applied more number of claims i.e) 2264 and its avg claim amt is \$ 1634.
- Here Heat map and Bar chart has been used.

➤ INCOME :

- Higher income people prefer MINIVAN.
- Average INCOME of Doctors are high among others.

RECOMMENDATIONS :

- Special plans should be framed for low income persons such as students and home makers to get large market share.
- Doctors and Lawyers get lowest claim amount and so considered them for special bonus.
- Insurance for SUV/Pickup/Minivan and Panel truck to be provided at a premium pricing
- Customers with lower old claims should be provided with an incentive for purchasing new insurance
- Claim Freq for panel truck is low so special focus has to be given because it is considered as safest vehicle than others.