

Foundations of Data Science (UCS548)

Dashboard Submission



THAPAR INSTITUTE
OF ENGINEERING & TECHNOLOGY
(Deemed to be University)

CAR INSURANCE POLICY DASHBOARD

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INTRODUCTION

A dashboard is a collection of several views, letting you compare a variety of data simultaneously.

A dashboard of Car Insurance Policies which gives various Insurance Counts with Average values.

Graphical depiction of many components with gender ,Marital Status ,Age and Education.

DATASET

Importing Dataset:

```
data = read.csv("InsurancePolicies_Insurance  
Policies.csv")
```

Checking for NULL values:

```
sum(is.na(data))
```

Replacing NULL values with mean:

```
for (i in which(sapply(data, is.numeric))) {  
  data[is.na(data[, i]), i] <- mean(data[, i], na.rm =  
TRUE)  
}
```

Displaying the summary and structure of dataset:

```
summary(data)  
str(data)
```

```
uniqueCast = unique(unlist(strsplit(data$Car Make,  
",")))
```

```
uniqueCountry = unique(unlist(strsplit(data$Car  
Model, ",")))
```

```
uniqueGenre =
```

```
unique(unlist(strsplit(data$Insurance, ",")))
```

```
df = data[-1]
```

```
str(df)
```

DASHBOARD

CAR INSURANCE POLICIES DASHBOARD

Car Make Car Model



INSURANCE COUNT
37,541



AVG CLAIM AMOUNT
\$50,029



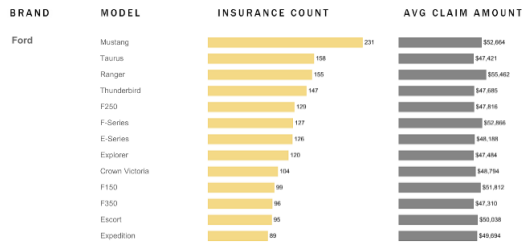
COMMERCIAL USE
7,482



PRIVATE USE
30,059



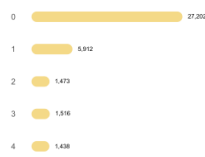
AVG HOUSEHOLD INCOME
\$147,247



CAR USE

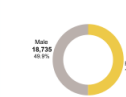
	Commercial	Private
Insurance count	7,482	30,059
Insurance count %	19.93%	80.07%
Avg Claim amount	\$50,005	\$50,034
Avg Household income	\$146,450	\$147,446

CLAIM FREQUENCY

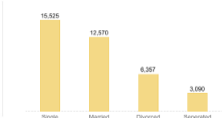


DEMOGRAPHICS (INSURANCE COUNT)

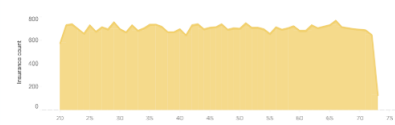
GENDER



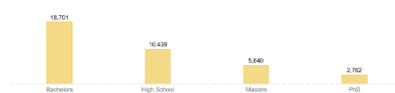
MARITAL STATUS



AGE



EDUCATION



CAR INSURANCE POLICIES DASHBOARD

Car Make Car Model



INSURANCE COUNT
993



AVG CLAIM AMOUNT
\$49,756



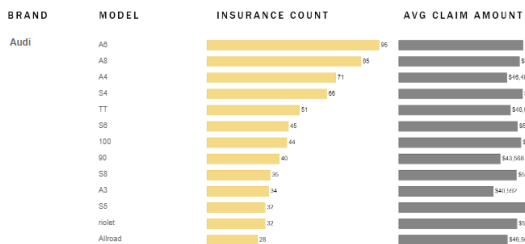
COMMERCIAL USE
194



PRIVATE USE
799



AVG HOUSEHOLD INCOME
\$151,733



CAR USE

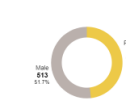
	Commercial	Private
Insurance count	194	799
Insurance count %	19.54%	80.46%
Avg Claim amount	\$49,983	\$49,701
Avg Household income	\$151,762	\$151,726

CLAIM FREQUENCY

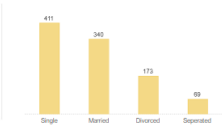


DEMOGRAPHICS (INSURANCE COUNT)

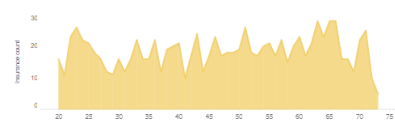
GENDER



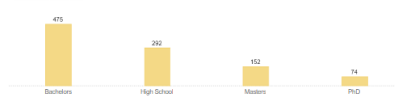
MARITAL STATUS

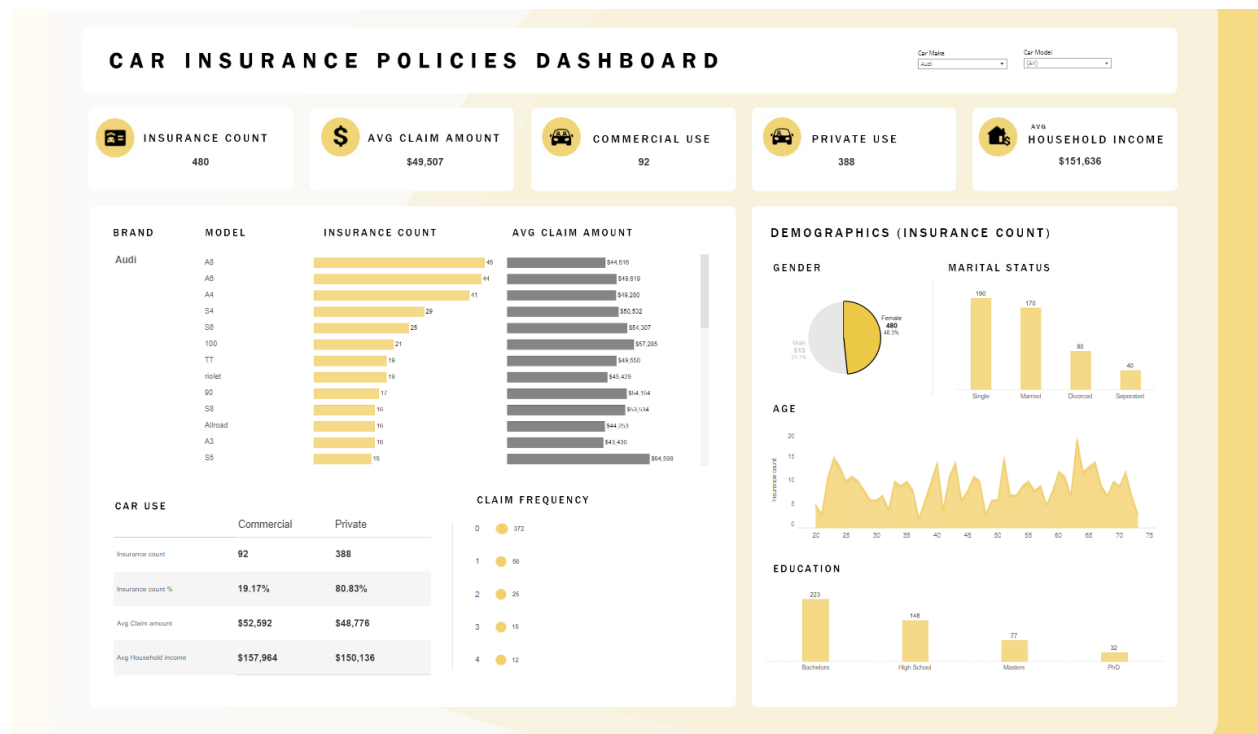


AGE



EDUCATION





Dataset Joins and Queries







Edit Set [T&B]



Name:

How would you like to combine the two sets?

Sets: 

- ☒  All members in both sets
- ☐  Shared members in both sets
- ☐  "bottom 5" except shared members
- ☐  "top 5" except shared members

Separate members by East, Green Tea, 2012

OK

Cancel

Apply

Top 5

Edit Set [top 5]



Name:

Members (5 total):

Car Make
Chevrolet
Dodge
Ford
GMC
Toyota

Copy

OK

Cancel

Apply

Bottom 5

Edit Set [bottom 5] ✕

Name:

Members (5 total):

Car Make	
Fairthorpe	
Fillmore	
Hillman	
Merkur	
MG	

Age Bins

Edit Bins [age] ✕

New field name:

Size of bins:

Range of Values:

Min:	<input type="text" value="20"/>	Diff:	<input type="text" value="53"/>
Max:	<input type="text" value="73"/>	CntD:	<input type="text" value="54"/>

Age(Group)

Edit Group [age (group)]



Field Name: age (group)

Groups:

Add to:



▼ ⓘ 19-29

19

20

21

22

23

24

25

26

27

28

29

> ⓘ 30-40

> ⓘ 41-50

> ⓘ 51-60

> ⓘ 61-72

73

Group

Rename

Ungroup



Show Add Location

☐ Include 'Other'

Find >>

Reset

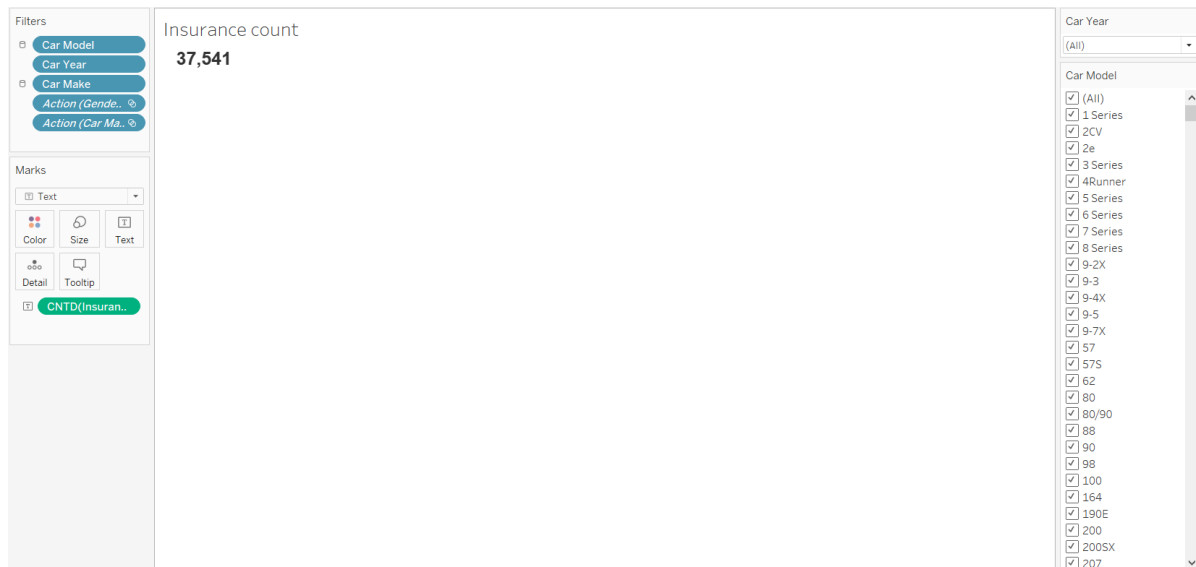
OK

Cancel

Apply

Navbar

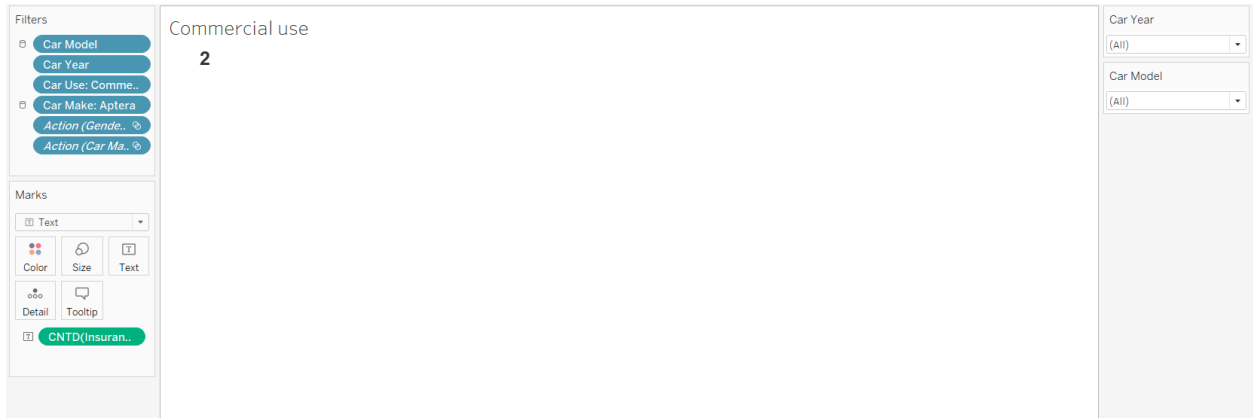
Insurance Count



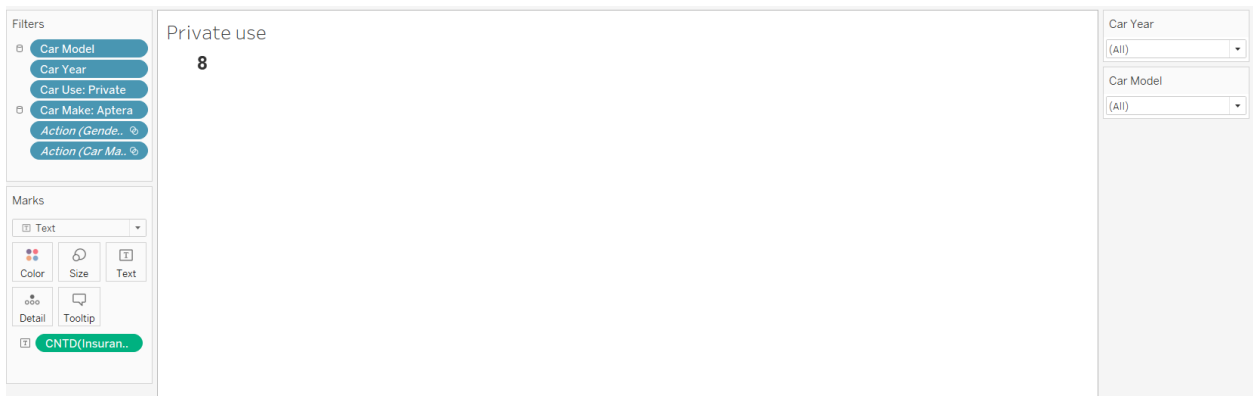
Total Claim Amount



Commercial Use



PrivateUse

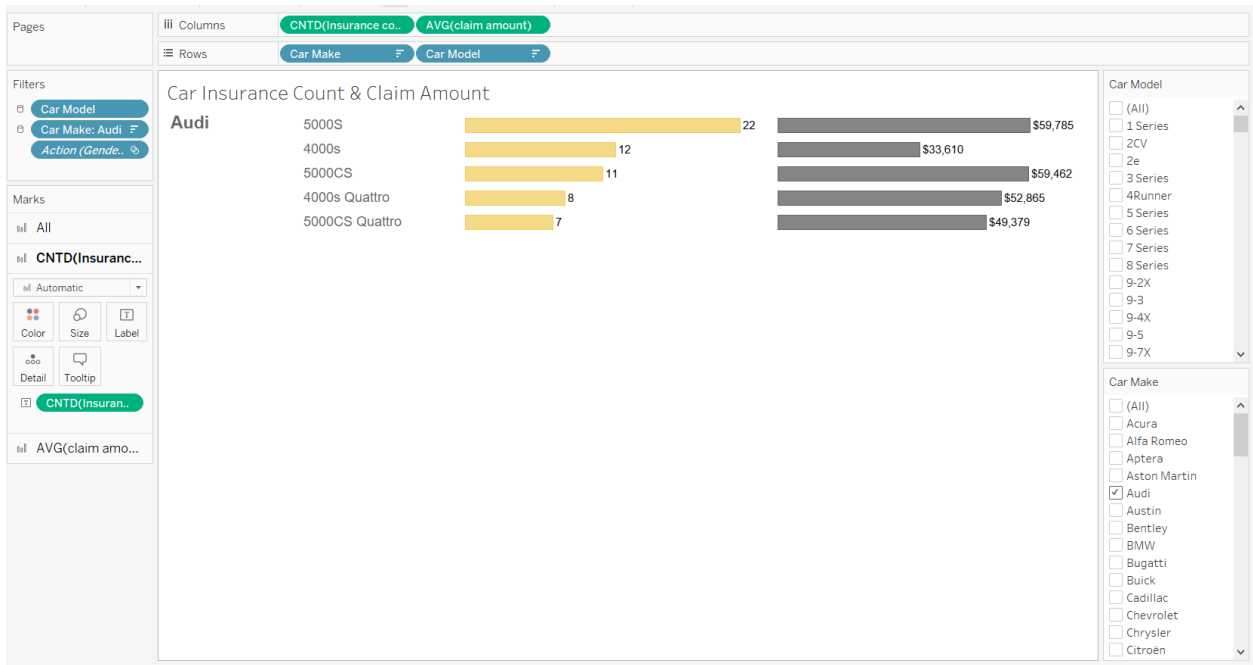


Household Income

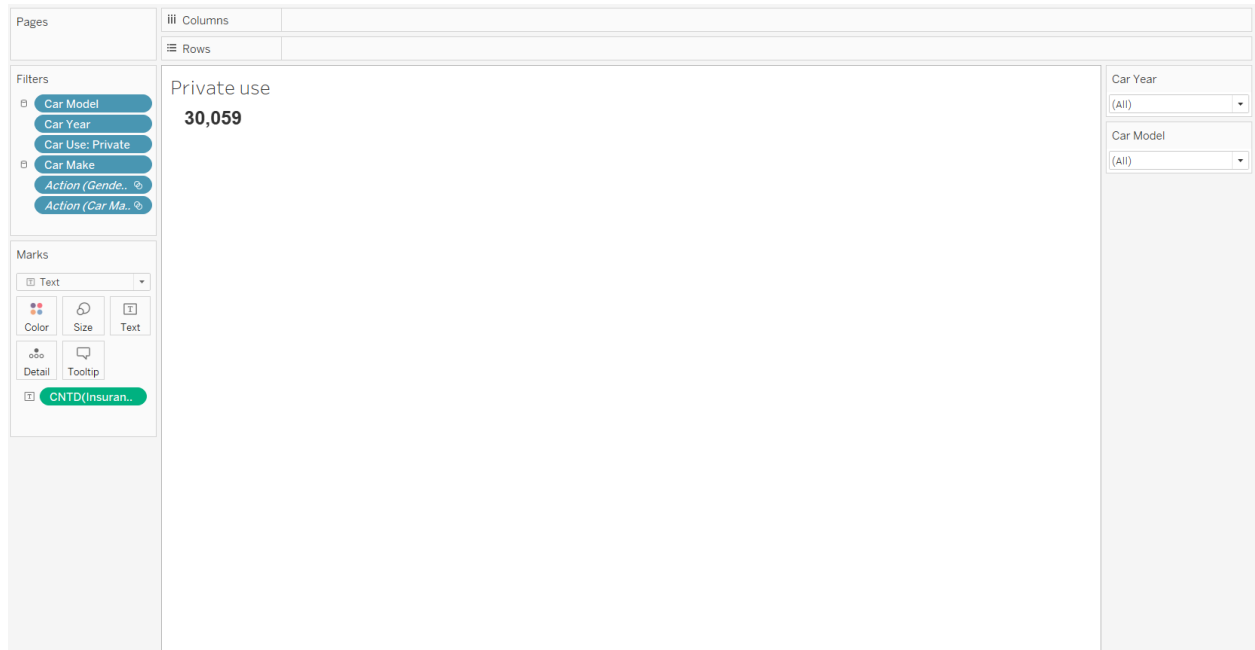


Insurance Count and Average Claim Count With Each Model and Brand

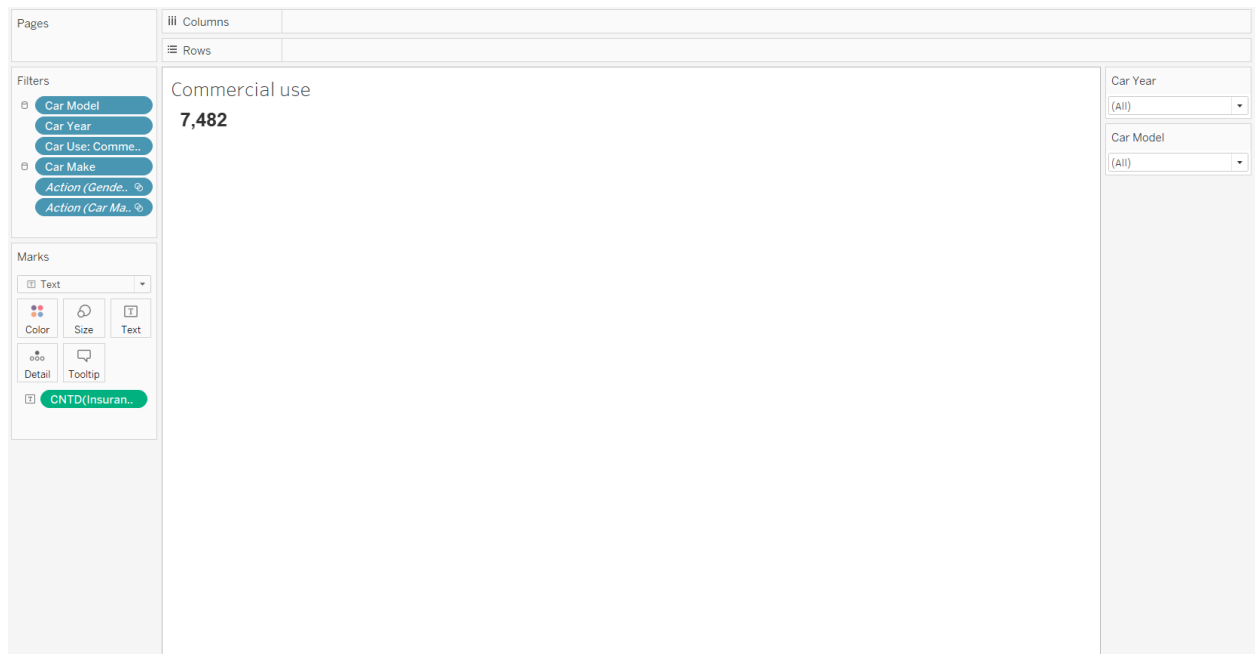
Car Insurance Count & Claim Amount



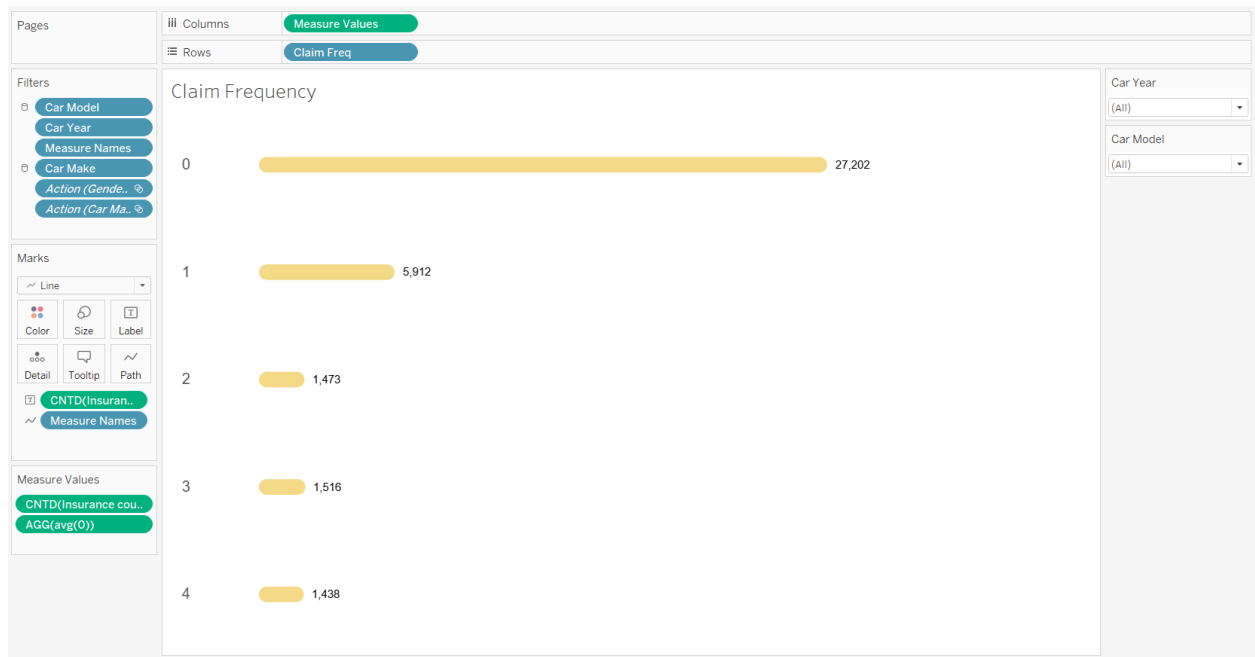
Claim Amount



Commercial Use

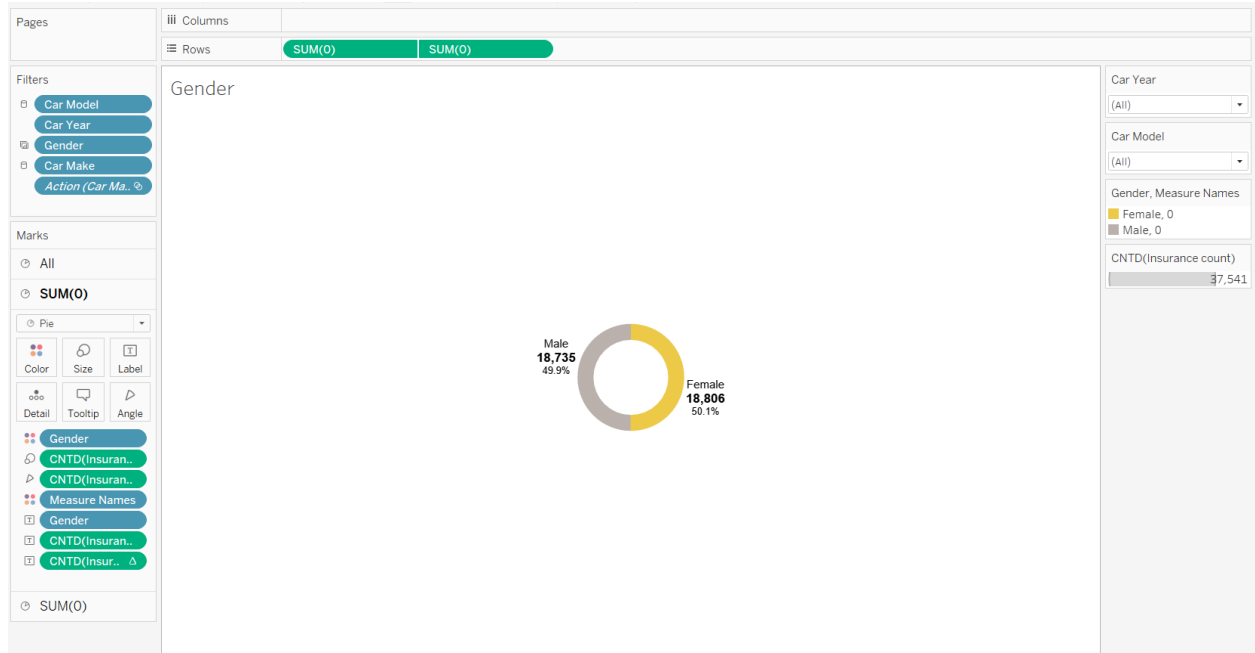


Claim Frequency

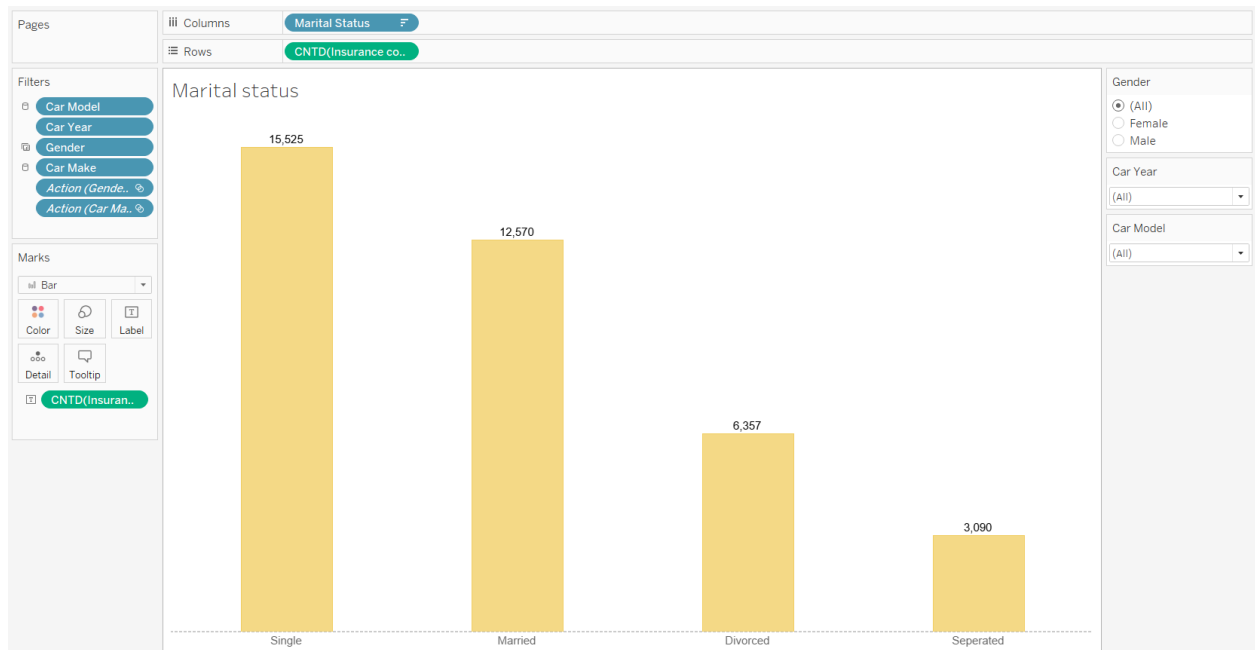


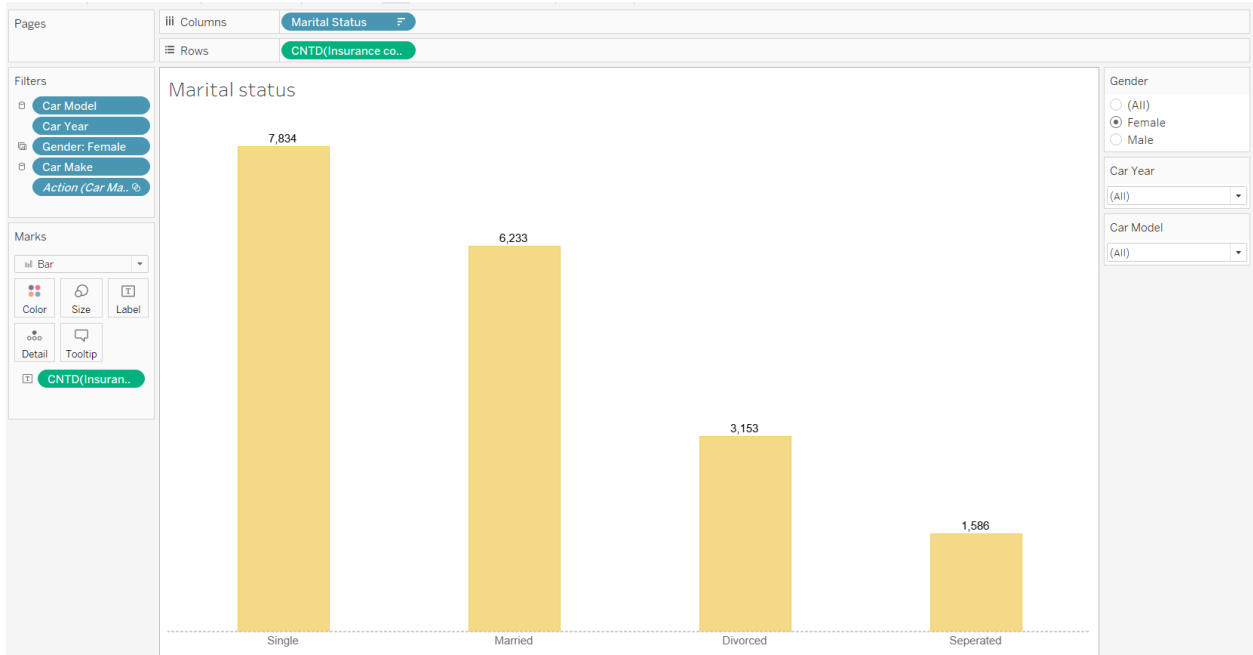
Demographics

Gender

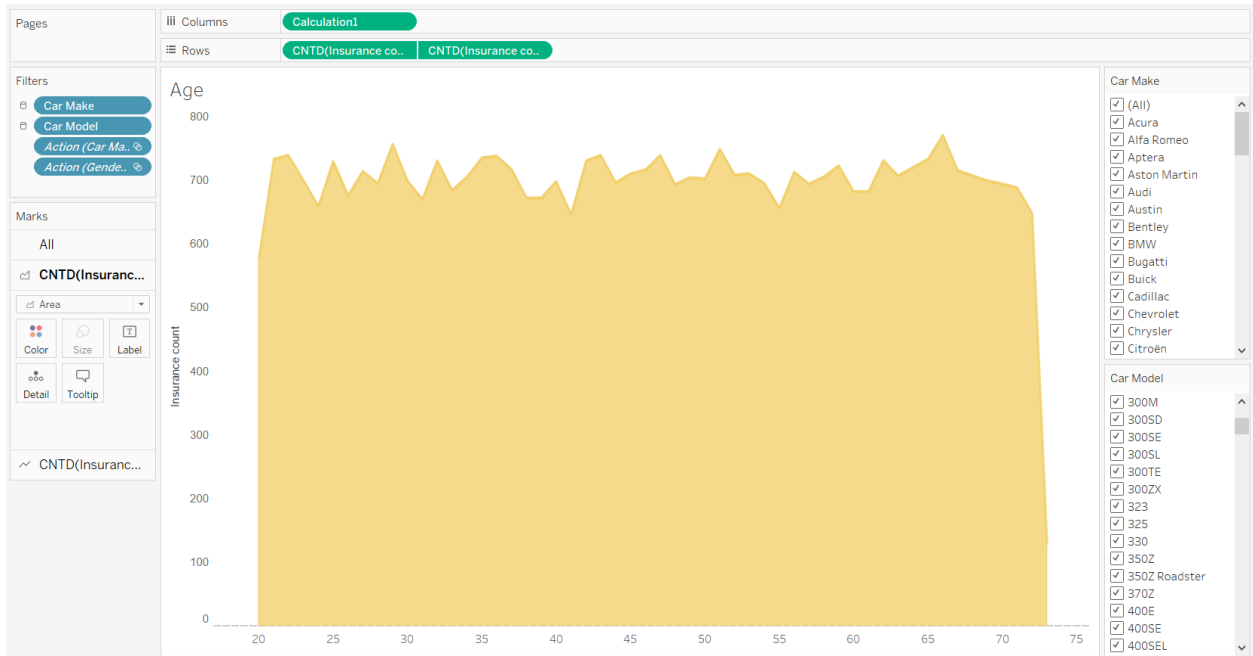


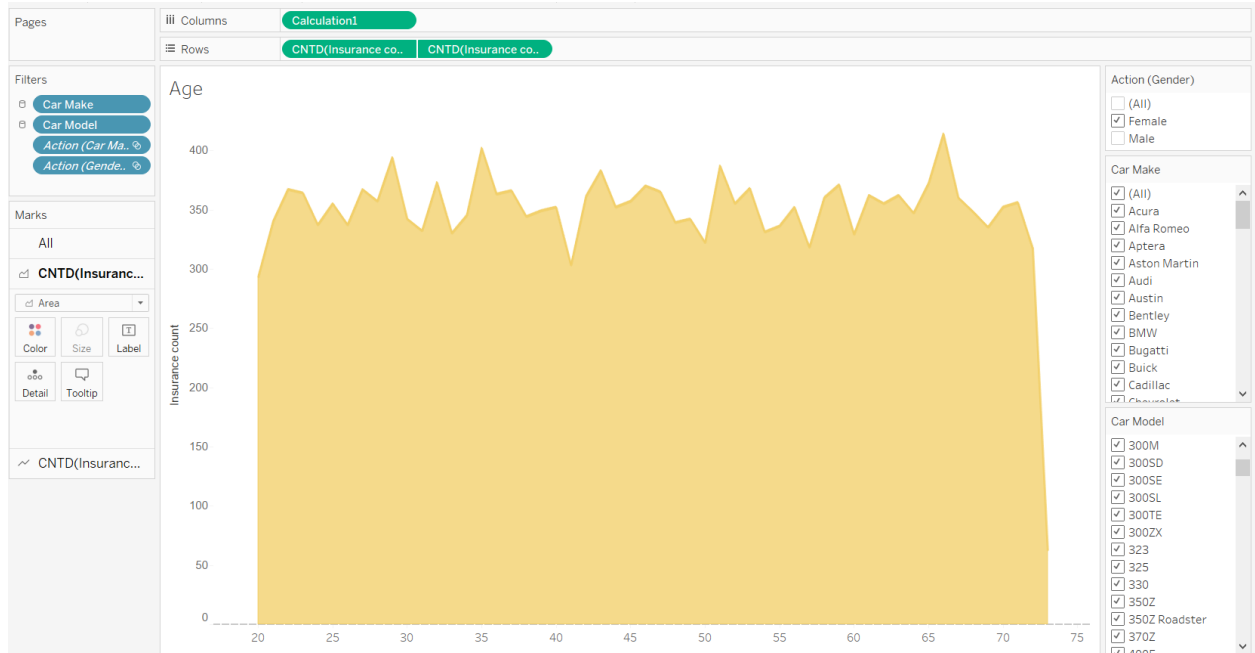
Marital Status





Age

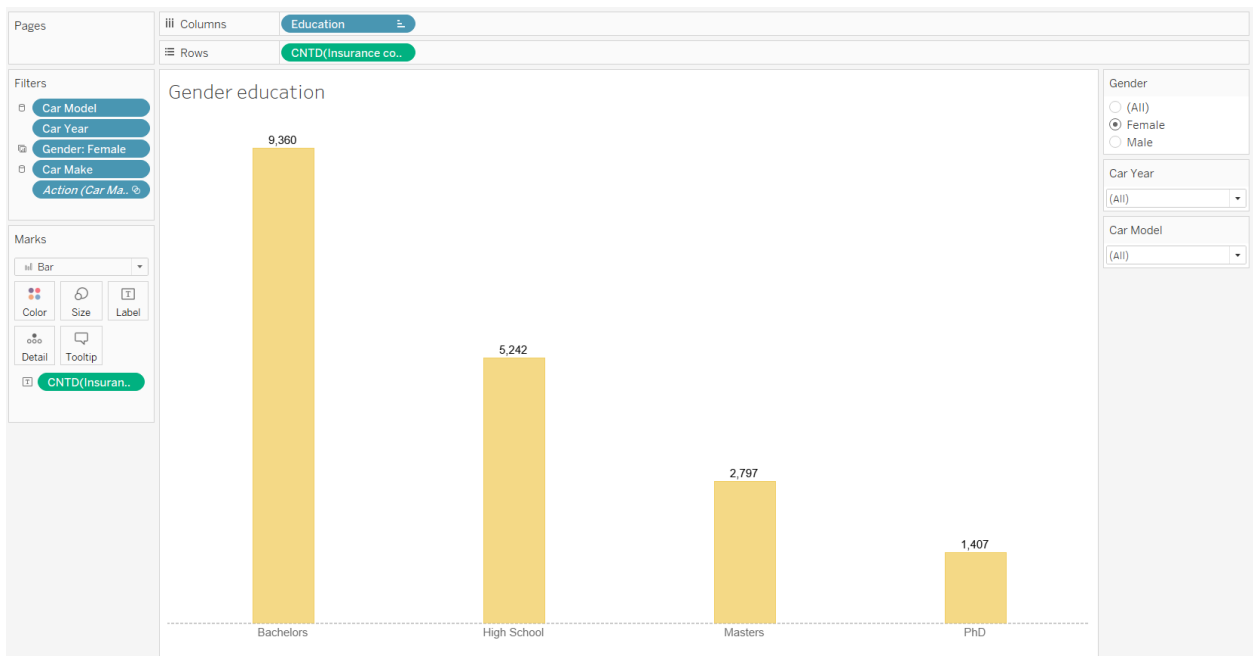
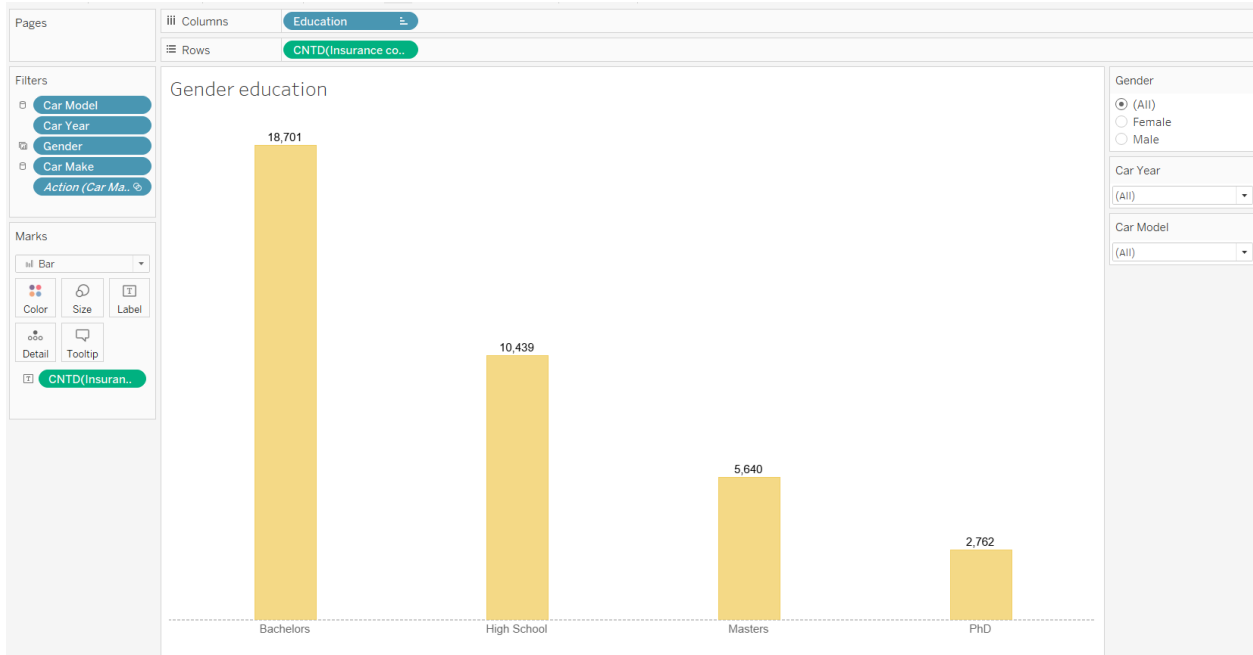




Age Average Count



Gender Education



Parameters

Total

×

```
{fixed [Car Model]: COUNTD([Insurance count])|
```



The calculation is valid.

Apply

OK

hh income

hh income ×

```
Float(IF LEFT([Household Income], 1) = "$" THEN
      MID([Household Income], 2)
      END)
```

The calculation is valid.

3 Dependencies ▾

Apply

OK

Insurance Count

Insurance count ×

[ID]

The calculation is valid.

17 Dependencies ▾

Apply

OK

Claim Amount

claim amount

×

Float

(

IF

LEFT

(

[Claim Amt]

,

1

)

=

"\$"

THEN

MID

(

[Claim Amt]

,

2

)

)

END)

The calculation is valid.

5 Dependencies ▾

Apply

OK

Calculations

Calculation 1

Calculation1

×

DATEDIFF('year',[Birthdate],TODAY())

▶

The calculation is valid.

2 Dependencies ▾

Apply

OK

Calculation2

Calculation2

×

IF [Parameter 1]=1 THEN COUNTD([Insurance count]) ELSE AVG([claim amount]) END|

▶

The calculation is valid.

2 Dependencies ▾

Apply

OK

Parameters

Edit Parameter [Parameter 1]



Name

Parameter 1

Properties

Data type

Integer

Display format

1

Current value

Insurance Count

Value when workbook opens

Current value

Allowable values

☐ All ☒ List ☐ Range

Value	Display As
1	Insurance Count
2	Avg. Claim Amount
Click to add	

☒ Fixed
☐ When workbook opens

Add values from

Remove Selected

Cancel

OK

Coverage Zone

