COMCAST ANALYSIS

```
library(dplyr)
library(ggplot2)
library(lubridate)
getwd()
getwd()
comcast<-read.csv("Comcast.csv")
head(comcast)
comcast$Date<-dmy(comcast$Date)
head(comcast)
```

	Ticket..	Customer.Complaint	Date
1	250635	Comcast Cable Internet Speeds	22-04-2015
2	223441	Payment disappear - service got disconnected	4/8/2015
3	242732	Speed and Service	18-04-2015
4	277946	Comcast Imposed a New Usage Cap of 300GB that punishes streaming.	5/7/2015
5	307175	Comcast not working and no service to boot	26-05-2015
6	338519	ISP Charging for arbitrary data limits with overage fees	6/12/2015

	Time	Received.Via	City	State	Zip.code	Status	Filing.on.Behalf.of.Someone
1	3:53:50 PM	Customer Care Call	Abingdon	Maryland	21009	Closed	No
2	10:22:56 AM	Internet	Acworth	Georgia	30102	Closed	No
3	9:55:47 AM	Internet	Acworth	Georgia	30101	Closed	Yes
4	11:59:35 AM	Internet	Acworth	Georgia	30101	Open	Yes
5	1:25:26 PM	Internet	Acworth	Georgia	30101	Solved	No

6 9:59:40 PM Internet Acworth Georgia 30101 Solved No

> comcast$Date<-dmy(comcast$Date)

> head(comcast)

Ticket.. Customer.Complaint Date

1 250635 Comcast Cable Internet Speeds 2015-04-22

2 223441 Payment disappear - service got disconnected 2015-08-04

3 242732 Speed and Service 2015-04-18

4 277946 Comcast Imposed a New Usage Cap of 300GB that punishes streaming. 2015-07-05

5 307175 Comcast not working and no service to boot 2015-05-26

6 338519 ISP Charging for arbitrary data limits with overage fees 2015-12-06

Time Received.Via City State Zip.code Status Filing.on.Behalf.of.Someone

1 3:53:50 PM Customer Care Call Abingdon Maryland 21009 Closed No

2 10:22:56 AM Internet Acworth Georgia 30102 Closed No

3 9:55:47 AM Internet Acworth Georgia 30101 Closed Yes

4 11:59:35 AM Internet Acworth Georgia 30101 Open Yes

5 1:25:26 PM Internet Acworth Georgia 30101 Solved No

6 9:59:40 PM Internet Acworth Georgia 30101 Solved No

#complaint on daily basis

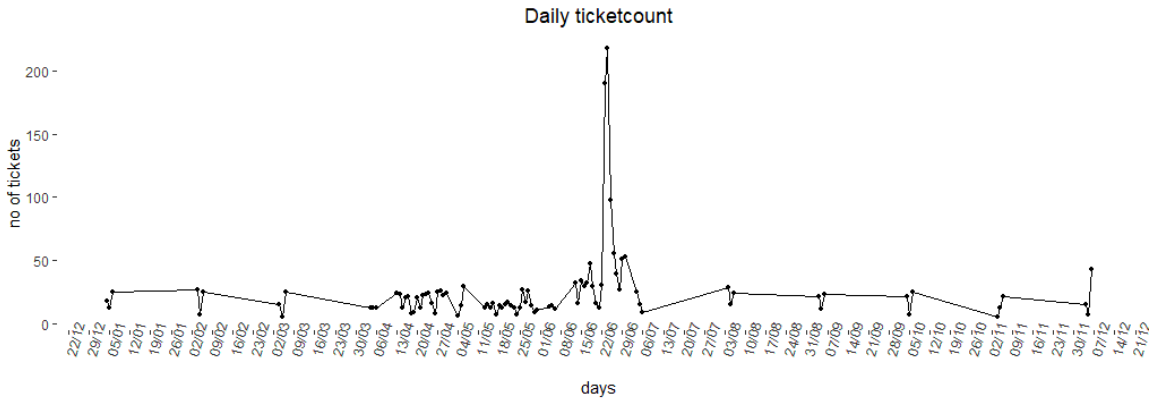
dailybasis<-comcast %>% group_by(Date) %>% summarize(Numberofcomplaints=n())

ggplot(data=dailybasis,aes(as.POSIXct(Date),Numberofcomplaints))+

geom_line()+

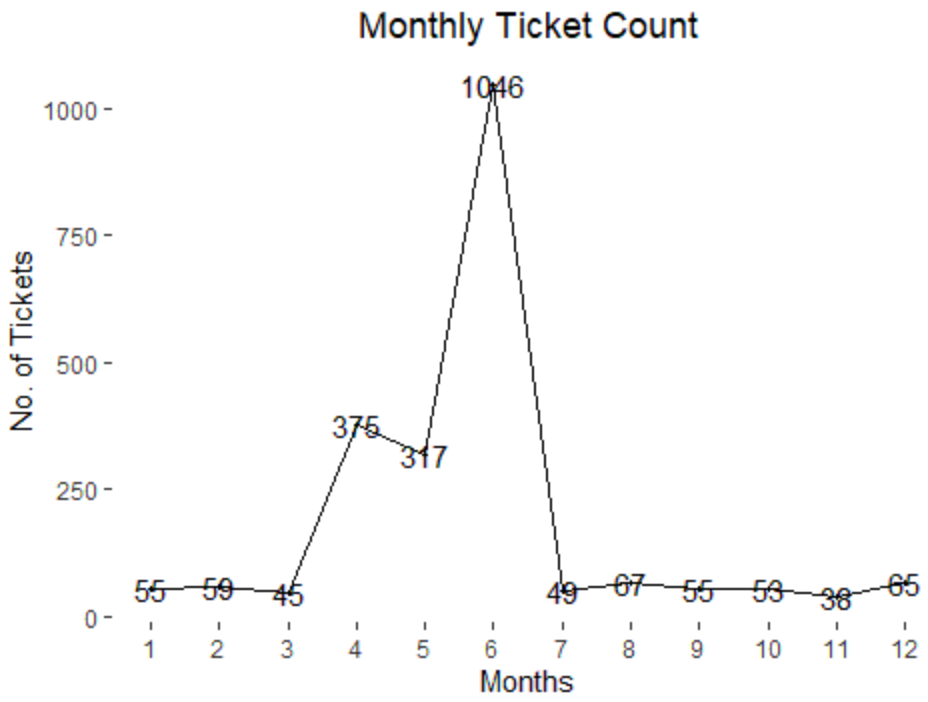
geom_point(size =1)+

```
  scale_x_datetime(breaks = "1 weeks", date_labels = "%d/%m")+
  labs(title="Daily ticketcount",x="days",y="no of tickets")+
  theme(axis.text.x = element_text(angle = 75),plot.title = element_text(hjust = 0.5) )
```



#complaint on month wise

```
monthwise<-comcast %>% group_by(month=as.integer(month(Date))) %>%
summarize(Numberofcomplaints=n())

ggplot(data = monthwise,aes(month,Numberofcomplaints,label = Numberofcomplaints))+
  geom_line()+
  geom_point(size = 0.8)+
  geom_text()+
  scale_x_continuous(breaks = monthwise$month)+
  labs(title = "Monthly Ticket Count",x= "Months",y ="No. of Tickets")+
  theme(plot.title = element_text(hjust = 0.5))
```



#ticket count

network_ticket<-contains(comcast$Customer.Complaint,match="network",ignore.case=T)

internet_ticket<-contains(comcast$Customer.Complaint,match="internet",ignore.case=T)

bill_ticket<-contains(comcast$Customer.Complaint,match="bill",ignore.case=T)

email_ticket<-contains(comcast$Customer.Complaint,match="email",ignore.case=T)

charge_ticket<-contains(comcast$Customer.Complaint,match="charge",ignore.case=T)

comcast$complaint.type[internet_ticket]<-"Internet"

comcast$complaint.type[network_ticket]<-"Network"

comcast$complaint.type[bill_ticket]<-"Bill"

comcast$complaint.type[email_ticket]<-"Email"

comcast$complaint.type[charge_ticket]<-"Charge"

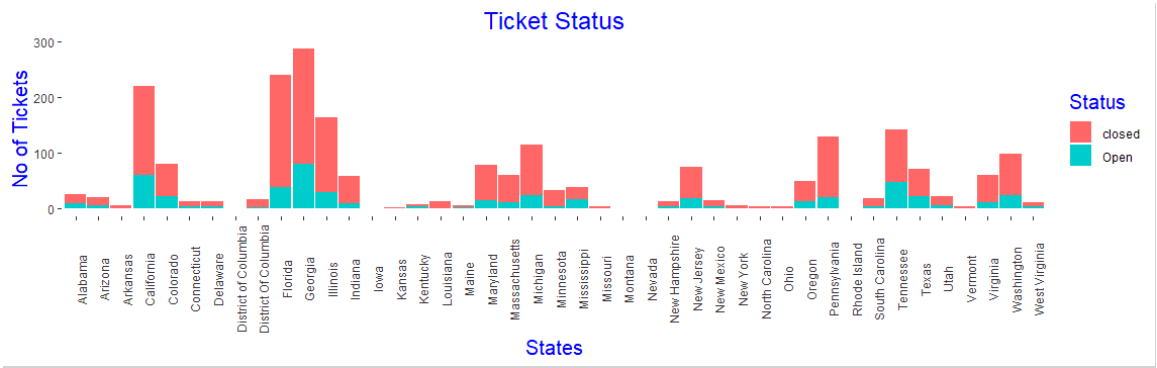
comcast$complaint.type[-c(internet_ticket,network_ticket,bill_ticket,email_ticket,charge_ticket)]<-"others"

```
table(comcast$complaint.type)

Bill   Charge    Email Internet  Network   others

   363     139      16     472       1     1233

# statusof closed and open ticket

open_complaint<-(comcast$Status=='Open' |comcast$Status=='Pending' )

closed_complaint<-(comcast$Status=='Closed' |comcast$Status=='Solved' )

comcast$complaint.status[open_complaint]<-"Open"

comcast$complaint.status[closed_complaint]<-"closed"

ticket.status<-table(comcast$complaint.status,comcast$State)

ticket.status

 Alabama Arizona Arkansas California Colorado Connecticut Delaware District of Columbia

 closed     17     14      6      159     58        9      8             1

 Open       9      6       0      61      22        3      4             0


      District Of Columbia Florida Georgia Illinois Indiana Iowa Kansas Kentucky Louisiana

 closed              14    201    208     135     50   1     1      4      12

 Open                2     39     80      29      9    0     1      3      1


      Maine Maryland Massachusetts Michigan Minnesota Mississippi Missouri Montana Nevada

 closed    3      63         50      92      29        23      3      1     1

 Open      2      15         11      23      4         16      1      0     0


      New Hampshire New Jersey New Mexico New York North Carolina Ohio Oregon Pennsylvania

 closed          8       56       11      6          3    3     36        110

 Open            4       19       4       0          0    0     13        20
```

	Rhode Island	South Carolina	Tennessee	Texas	Utah	Vermont	Virginia	Washington
closed	1	15	96	49	16	2	49	75
Open	0	3	47	22	6	1	11	23

	West Virginia
closed	8
Open	3

```
#find the state wise complaint
comcast<-group_by(comcast,State,complaint.status)
chart<-summarise(comcast,count=n())
ggplot(as.data.frame(chart),mapping = aes(State,count))+
 geom_col(aes(fill=complaint.status),width=.95)+
 theme(axis.text.x = element_text(angle=90),
       axis.title.y = element_text(size=15),
       axis.title.x = element_text(size=15),
       title = element_text(size=15,color="blue"),
       plot.title = element_text(hjust =0.5))+
       labs(title = "Ticket Status",x="States",y="No of Tickets",fill="Status")
```



#find the state with maximum complaint

comcast %>% filter(complaint.status=='Open') %>%group_by(State) %>%
summarise(numeberofcomplaint=n())

State	numeberofcomplaint
<chr>	<int>
1 Alabama	9
2 Arizona	6
3 California	61
4 Colorado	22
5 Connecticut	3
6 Delaware	4
7 District Of Columbia	2
8 Florida	39
9 Georgia	80
10 Illinois	29

ℹ 24 more rows

ℹ Use `print(n = ...)` to see more rows

#find the total complaints

total_complaint<-comcast %>% group_by(complaint.status) %>% summarise(numberofcomplaints=n())

total_complaint

complaint.status	numberofcomplaints
<chr>	<int>
1 Open	517
2 closed	1707

#pie chart to show the percentage of complaints

```
slices<-total_complaint$numberofcomplaints

percentage<-round((slices/sum(slices)*100),2)

lab<-paste(total_complaint$complaint.status,"",percentage,"%",sep="")

pie(slices,labels =lab )
```