Comcast-Telecom-Consumer-Complaints.R

labsuser

2022-09-17

```
rm(list = ls(all = TRUE))
telcom <- read.csv('Comcast Telecom Complaints data.csv')</pre>
head(telcom)
     Ticket..
Customer.Complaint
                                                  Comcast Cable Internet
## 1
       250635
Speeds
## 2
                                   Payment disappear - service got
       223441
disconnected
## 3
       242732
                                                              Speed and
Service
## 4
       277946 Comcast Imposed a New Usage Cap of 300GB that punishes
streaming.
       307175
                                     Comcast not working and no service to
## 5
boot
## 6
       338519
                       ISP Charging for arbitrary data limits with overage
fees
                                  Received. Via
##
           Date
                       Time
                                                   City
                                                           State Zip.code
Status
## 1 22-04-2015 3:53:50 PM Customer Care Call Abingdon Maryland
                                                                    21009
Closed
## 2
      4/8/2015 10:22:56 AM
                                      Internet Acworth Georgia
                                                                    30102
Closed
## 3 18-04-2015 9:55:47 AM
                                      Internet Acworth Georgia
                                                                    30101
Closed
## 4
       5/7/2015 11:59:35 AM
                                      Internet Acworth Georgia
                                                                    30101
0pen
## 5 26-05-2015 1:25:26 PM
                                      Internet Acworth Georgia
                                                                    30101
Solved
## 6 6/12/2015 9:59:40 PM
                                      Internet Acworth Georgia
                                                                    30101
Solved
     Filing.on.Behalf.of.Someone
## 1
                              No
## 2
                              No
## 3
                             Yes
## 4
                             Yes
## 5
                              No
## 6
                              No
```

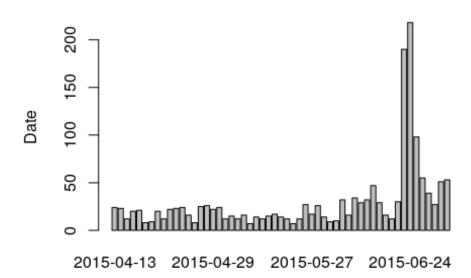
```
summary(telcom)
##
      Ticket..
                          Customer.Complaint
                                                     Date
                                                                         Time
##
   211255 : 1
                   Comcast
                                  : 83
                                             24-06-2015: 218
                                                               1:07:49 PM:
2
##
   211472 :
                  Comcast Internet: 18
                                             23-06-2015: 190
                                                               1:12:13 PM:
              1
2
##
  211478 :
                  Comcast Data Cap : 17
                                             25-06-2015:
                                                          98
                                                               1:26:23 PM:
              1
2
##
                                             26-06-2015:
  211677 :
               1
                  comcast
                                      13
                                                          55
                                                               1:29:58 PM:
2
##
   211775 :
                  Comcast Billing :
                                      11
                                             30-06-2015:
                                                          53
                                                               1:30:10 PM:
              1
2
## 211784 :
              1
                  Comcast Data Caps: 11
                                             29-06-2015:
                                                          51
                                                               10:02:10 AM:
2
##
   (Other):2218
                   (Other)
                                   :2071
                                              (Other) :1559
                                                                (Other)
:2212
##
                Received.Via
                                       City
                                                          State
##
  Customer Care Call:1119
                                                              : 288
                             Atlanta
                                         :
                                            63
                                                 Georgia
##
   Internet
                      :1105
                                            47
                                                  Florida
                                                              : 240
                              Chicago
##
                             Knoxville
                                            36
                                                 California
                                                             : 220
##
                                            33
                                                 Illinois
                                                              : 164
                             Houston
##
                              Jacksonville:
                                            31
                                                 Tennessee
                                                              : 143
                             Philadelphia: 25
##
                                                  Pennsylvania: 130
##
                              (Other)
                                         :1989
                                                  (Other)
                                                              :1039
##
      Zip.code
                                  Filing.on.Behalf.of.Someone
                        Status
   Min. : 1075
##
                   Closed:734
                                  No :2021
##
   1st Qu.:30056
                    0pen
                          :363
                                 Yes: 203
##
   Median :37211
                    Pending:154
##
   Mean
           :47994
                   Solved: 973
   3rd Qu.:77059
   Max. :99223
##
##
str(telcom)
## 'data.frame':
                   2224 obs. of 10 variables:
## $ Ticket..
                                : Factor w/ 2224 levels
"211255", "211472", ...: 371 124 307 611 849 1214 1763 1590 967 2110 ...
                               : Factor w/ 1841 levels "(Comcast is not my
## $ Customer.Complaint
complaint!) Cyber Tele-marketing is my complaint!",..: 307 1519 1660 498 646
1353 1715 711 446 695 ...
## $ Date
                                 : Factor w/ 91 levels "13-04-2015", "13-05-
2015",..: 28 66 16 77 41 83 36 33 80 48 ...
## $ Time
                                 : Factor w/ 2190 levels "1:00:18
AM", "1:00:32 PM",..: 1198 291 2165 652 89 2189 252 1666 594 1648 ...
## $ Received.Via
                              : Factor w/ 2 levels "Customer Care
Call",..: 1 2 2 2 2 2 1 2 1 1 ...
## $ City
                                 : Factor w/ 928 levels
"Abingdon", "Acworth", ...: 1 2 2 2 2 2 3 4 4 ...
```

```
## $ State
                         : Factor w/ 43 levels
"Alabama", "Arizona",..: 19 11 11 11 11 11 11 21 4 4 ...
## $ Zip.code
                                 : int 21009 30102 30101 30101 30101 30101
30101 49221 94502 94501 ...
## $ Status
                                 : Factor w/ 4 levels "Closed", "Open", ...: 1 1
1 2 4 4 3 4 1 2 ...
## $ Filing.on.Behalf.of.Someone: Factor w/ 2 levels "No","Yes": 1 1 2 2 1 1
1 1 1 2 ...
telcom$Date <- as.Date(telcom$Date,format="%d-%m-%Y")</pre>
head(telcom)
##
    Ticket..
Customer.Complaint
## 1
      250635
                                                  Comcast Cable Internet
Speeds
## 2
      223441
                                   Payment disappear - service got
disconnected
## 3
      242732
                                                              Speed and
Service
## 4
      277946 Comcast Imposed a New Usage Cap of 300GB that punishes
streaming.
      307175
                                     Comcast not working and no service to
## 5
boot
## 6
      338519
                       ISP Charging for arbitrary data limits with overage
fees
##
                       Time
                                  Received.Via
                                                   City
           Date
                                                           State Zip.code
Status
## 1 2015-04-22 3:53:50 PM Customer Care Call Abingdon Maryland
                                                                    21009
Closed
## 2
           <NA> 10:22:56 AM
                                      Internet Acworth Georgia
                                                                    30102
Closed
## 3 2015-04-18 9:55:47 AM
                                      Internet Acworth Georgia
                                                                    30101
Closed
## 4
           <NA> 11:59:35 AM
                                      Internet Acworth Georgia
                                                                    30101
0pen
## 5 2015-05-26 1:25:26 PM
                                      Internet Acworth Georgia
                                                                    30101
Solved
                                      Internet Acworth Georgia
## 6
           <NA> 9:59:40 PM
                                                                    30101
Solved
    Filing.on.Behalf.of.Someone
##
## 1
                              No
## 2
                              No
## 3
                             Yes
## 4
                             Yes
## 5
                              No
## 6
                              No
str(telcom)
```

```
## 'data.frame': 2224 obs. of 10 variables:
## $ Ticket..
                                 : Factor w/ 2224 levels
"211255", "211472", ...: 371 124 307 611 849 1214 1763 1590 967 2110 ...
                           : Factor w/ 1841 levels "(Comcast is not my
## $ Customer.Complaint
complaint!) Cyber Tele-marketing is my complaint!",..: 307 1519 1660 498 646
1353 1715 711 446 695 ...
                                 : Date, format: "2015-04-22" NA ...
## $ Date
                                 : Factor w/ 2190 levels "1:00:18
## $ Time
AM", "1:00:32 PM",..: 1198 291 2165 652 89 2189 252 1666 594 1648 ...
                                 : Factor w/ 2 levels "Customer Care
## $ Received.Via
Call",...: 1 2 2 2 2 2 1 2 1 1 ...
                                  : Factor w/ 928 levels
## $ City
"Abingdon", "Acworth", ...: 1 2 2 2 2 2 3 4 4 ...
## $ State
                                  : Factor w/ 43 levels
"Alabama", "Arizona", ...: 19 11 11 11 11 11 11 21 4 4 ...
## $ Zip.code
                                 : int 21009 30102 30101 30101 30101 30101
30101 49221 94502 94501 ...
## $ Status
                                 : Factor w/ 4 levels "Closed", "Open", ...: 1 1
1 2 4 4 3 4 1 2 ...
## $ Filing.on.Behalf.of.Someone: Factor w/ 2 levels "No","Yes": 1 1 2 2 1 1
1 1 1 2 ...
daily <- table(telcom$Date)</pre>
daily
##
## 2015-04-13 2015-04-14 2015-04-15 2015-04-16 2015-04-17 2015-04-18 2015-04-
19
##
           24
                      23
                                 12
                                             20
                                                        21
## 2015-04-20 2015-04-21 2015-04-22 2015-04-23 2015-04-24 2015-04-25 2015-04-
26
##
           20
                      12
                                 22
                                             23
                                                        24
                                                                   16
8
## 2015-04-27 2015-04-28 2015-04-29 2015-04-30 2015-05-13 2015-05-14 2015-05-
15
##
           25
                      26
                                 22
                                             24
                                                        12
                                                                   15
12
## 2015-05-16 2015-05-17 2015-05-18 2015-05-19 2015-05-20 2015-05-21 2015-05-
22
##
           16
                       7
                                 14
                                             12
                                                        15
                                                                   17
14
## 2015-05-23 2015-05-24 2015-05-25 2015-05-26 2015-05-27 2015-05-28 2015-05-
29
##
           12
                       7
                                 12
                                             27
                                                        17
                                                                   26
## 2015-05-30 2015-05-31 2015-06-13 2015-06-14 2015-06-15 2015-06-16 2015-06-
17
##
            9
                      10
                                 32
                                             16
                                                        34
                                                                   29
32
```

```
## 2015-06-18 2015-06-19 2015-06-20 2015-06-21 2015-06-22 2015-06-23 2015-06-
24
##
           47
                      29
                                  16
                                             12
                                                        30
                                                                   190
218
## 2015-06-25 2015-06-26 2015-06-27 2015-06-28 2015-06-29 2015-06-30
                      55
                                  39
                                             27
barplot(daily, xlab = 'Number of complaints', ylab = 'Date', main = 'Number
of complaints on daily based')
```

Number of complaints on daily based



Number of complaints

```
telcom_monthly = transform(telcom, MonthOfComplaint =
as.numeric(format(Date, format="%m")))
head(telcom_monthly)
##
     Ticket..
Customer.Complaint
                                                   Comcast Cable Internet
## 1
       250635
Speeds
                                    Payment disappear - service got
## 2
       223441
disconnected
## 3
       242732
                                                               Speed and
Service
## 4
       277946 Comcast Imposed a New Usage Cap of 300GB that punishes
streaming.
## 5
       307175
                                      Comcast not working and no service to
boot
## 6
       338519
                       ISP Charging for arbitrary data limits with overage
```

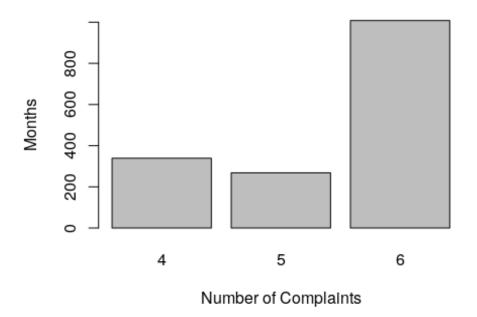
```
fees
##
                       Time
                                  Received.Via
                                                    City
                                                            State Zip.code
           Date
Status
## 1 2015-04-22 3:53:50 PM Customer Care Call Abingdon Maryland
                                                                     21009
Closed
## 2
           <NA> 10:22:56 AM
                                      Internet Acworth Georgia
                                                                     30102
Closed
## 3 2015-04-18 9:55:47 AM
                                      Internet Acworth
                                                          Georgia
                                                                     30101
Closed
## 4
           <NA> 11:59:35 AM
                                      Internet Acworth Georgia
                                                                     30101
0pen
## 5 2015-05-26 1:25:26 PM
                                      Internet Acworth Georgia
                                                                     30101
Solved
                                      Internet Acworth Georgia
## 6
           <NA> 9:59:40 PM
                                                                     30101
Solved
##
     Filing.on.Behalf.of.Someone MonthOfComplaint
## 1
                              No
## 2
                              No
                                                NA
## 3
                                                 4
                             Yes
## 4
                             Yes
                                                NA
## 5
                              No
                                                 5
## 6
                                                NΑ
                              No
Monthly = table(telcom_monthly$MonthOfComplaint)
Monthly
##
##
      4
           5
                6
    339 268 1008
##
barplot(Monthly, ylab="Months", xlab="Number of Complaints", main="Number of
complaints by Month")
noofcomp <- table(telcom$Customer.Complaint)</pre>
head(noofcomp)
##
(Comcast is not my complaint!) Cyber Tele-marketing is my complaint!
##
## 10 Days No Service - 12 Appointments Comcast Hasn't Shown Up - Comcast Has
Not Fixed Home Infinity X1 - In 10 Days- Cannot Make 911 Calls
##
1
##
2 months and Comcast has not fixed problem
##
1
##
2+ Day Degraded Services
```

```
##
1
##
300 gb cap
##
1
##
300 GB monthly allowance
1
library(dplyr)
##
## Attaching package: 'dplyr'
## The following objects are masked from 'package:stats':
##
##
       filter, lag
## The following objects are masked from 'package:base':
##
##
       intersect, setdiff, setequal, union
noofcomp1 = arrange(as.data.frame(noofcomp),desc(Freq))
head(noofcomp1)
##
                  Var1 Freq
## 1
               Comcast
                         83
## 2 Comcast Internet
                         18
## 3 Comcast Data Cap
                         17
## 4
               comcast
                         13
## 5
                         11
       Comcast Billing
## 6 Comcast Data Caps
                         11
complaint_status = transform(telcom,FinalStatus =
ifelse((Status=='Open' | Status=='Pending'), "Open", "Closed"))
head(telcom)
##
     Ticket..
Customer.Complaint
## 1
       250635
                                                   Comcast Cable Internet
Speeds
                                    Payment disappear - service got
## 2
       223441
disconnected
## 3
       242732
                                                                Speed and
Service
       277946 Comcast Imposed a New Usage Cap of 300GB that punishes
## 4
streaming.
## 5
       307175
                                      Comcast not working and no service to
boot
## 6
                       ISP Charging for arbitrary data limits with overage
       338519
```

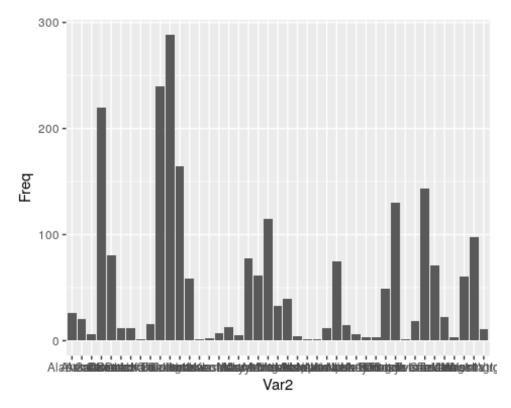
_								
fees	Data	+ :		Dagaiva	٠ ٧٠ -	C	Ctata :	7in codo
## Status	Date	11	me	Receive	u.via	City	State .	Zip.code
	04 22	2.52.50	DΜ	Customer Care	C-11	Ahinadon	Manuland	21009
Closed	-64-22	3.33.30	Pľľ	customer care	Call	ADITIGUOTI	магутапи	21009
## 2	∠N/Λ \	10.22.56	۸м	Tn+	onnot	Acworth	Georgia	30102
"" Z Closed	(IVA)	10.22.30	AIT	1110	ernec	ACWOITCII	deorgia	30102
## 3 2015	_0/_10	0.55.47	۸м	Int	annat	Acworth	Georgia	30101
Closed	-04-10	9.33.47	Αl·I	1110	ernec	ACWOI CII	deoi gia	20101
## 4	ΖΝΔ \$	11:59:35	ΔΜ	Int	ernet	Acworth	Georgia	30101
0pen	NIAZ	11.55.55	~ 1	1110	cincc	ACWOI CII	deoi gia	30101
## 5 2015	-05-26	1 • 25 • 26	ΡМ	Int	ernet	Acworth	Georgia	30101
Solved	03 20	1.23.20		1110	ci iic c	Acwor en	deoi giu	30101
## 6	∠NΛ \	9:59:40	DΜ	Int	arnat	Acworth	Georgia	30101
Solved	NA/	2.33.40	111	1110	ernec	ACWOI CII	deol gra	30101
	ng on F	Behalf.of.	Son	neone				
## 1	iig.0ii.i	ciiaii .oi .	5011	No				
## 2				No				
## 3				Yes				
## 4				Yes				
## 5				No				
## 6				No				
0				110				
head(comp	laint_s	status)						
neau(complaint_status)								
## Tick								
Customer.	Complai	int						
Customer.		int				Comcas	st Cable I	nternet
Customer.0 ## 1 250 Speeds	Complai 0635	int						
Customer.(## 1 250 Speeds ## 2 22	Compla: 0635 3441	int		Paymen	t disa		st Cable I service go	
Customer.0 ## 1 250 Speeds ## 2 22 disconnec	Complai 0635 3441 ted	int		Paymen	t disa		service go	t
Customer.0 ## 1 250 Speeds ## 2 22 disconnect ## 3 24	Compla: 0635 3441	int		Paymen	t disa		service go	
Customer.0 ## 1 250 Speeds ## 2 22 disconnect ## 3 24 Service	Compla: 0635 3441 ted 2732			ŕ		appear - s	service go	t ed and
Customer.0 ## 1 250 Speeds ## 2 222 disconnece ## 3 242 Service ## 4 27	Complai 0635 3441 ted 2732		oose	Paymen ed a New Usage		appear - s	service go	t ed and
Customer.0 ## 1 250 Speeds ## 2 22 disconnect ## 3 24 Service ## 4 27 streaming	Compla: 0635 3441 ted 2732 7946 Co		ose	ed a New Usage	Сар	appear - s	service go Spe	t ed and hes
Customer.0 ## 1 250 Speeds ## 2 22 disconnect ## 3 24 Service ## 4 27 streaming ## 5 30	Complai 0635 3441 ted 2732		oose	ed a New Usage	Сар	appear - s	service go	t ed and hes
Customer.0 ## 1 250 Speeds ## 2 22 disconnect ## 3 24 Service ## 4 27 streaming ## 5 30 boot	Compla: 0635 3441 ted 2732 7946 Co	omcast Imp		ed a New Usage Comc	Cap o	appear - s of 300GB t	service go Spe that punis g and no se	t ed and hes ervice to
Customer.0 ## 1 250 Speeds ## 2 22 disconnect ## 3 24 Service ## 4 27 streaming ## 5 30 boot ## 6 33	Compla: 0635 3441 ted 2732 7946 Co	omcast Imp		ed a New Usage	Cap o	appear - s of 300GB t	service go Spe that punis g and no se	t ed and hes ervice to
Customer.0 ## 1 250 Speeds ## 2 22 disconnect ## 3 24 Service ## 4 27 streaming ## 5 30 boot ## 6 333 fees	Complai 0635 3441 ted 2732 7946 Co 7175	omcast Imp IS	SP (ed a New Usage Comc Charging for a	Cap o ast no rbitra	appear - s of 300GB t ot working ary data I	Service go Spec that punis g and no so limits with	t ed and hes ervice to h overage
Customer.0 ## 1 250 Speeds ## 2 22: disconnect ## 3 24: Service ## 4 27 streaming ## 5 30 boot ## 6 33: fees ##	Compla: 0635 3441 ted 2732 7946 Co	omcast Imp IS		ed a New Usage Comc	Cap o ast no rbitra	appear - s of 300GB t ot working ary data I	Service go Spec that punis g and no so limits with	t ed and hes ervice to
Customer.0 ## 1 250 Speeds ## 2 22 disconnece ## 3 24 Service ## 4 27 streaming ## 5 30 boot ## 6 33 fees ## Status	Complai 0635 3441 ted 2732 7946 Co 7175 8519	omcast Imp IS Ti	SP (ed a New Usage Comc Charging for a Receive	Cap (ast no rbitra d.Via	of 300GB to ot working ary data I	Specthat punishing and no selimits with	t ed and hes ervice to h overage Zip.code
Customer.0 ## 1 250 Speeds ## 2 22 disconnec ## 3 24 Service ## 4 27 streaming ## 5 30 boot ## 6 33 fees ## Status ## 1 2015	Complai 0635 3441 ted 2732 7946 Co 7175 8519	omcast Imp IS Ti	SP (ed a New Usage Comc Charging for a	Cap (ast no rbitra d.Via	of 300GB to ot working ary data I	Specthat punishing and no selimits with	t ed and hes ervice to h overage
Customer.0 ## 1 250 Speeds ## 2 22 disconnect ## 3 24 Service ## 4 27 streaming ## 5 30 boot ## 6 33 fees ## Status ## 1 2015 Closed	Complai 0635 3441 ted 2732 7946 Co 7175 8519 Date -04-22	omcast Imp IS Ti 3:53:50	SP (Ime PM	ed a New Usage Comc Charging for a Receive Customer Care	Cap of ast not reported as the contract of the	of 300GB to working ary data City Abingdon	Service go Specthat punish g and no so limits with State	t ed and hes ervice to h overage Zip.code 21009
Customer.0 ## 1 256 Speeds ## 2 22: disconnece ## 3 24: Service ## 4 27 streaming ## 5 30 boot ## 6 33: fees ## Status ## 1 2015 Closed ## 2	Complai 0635 3441 ted 2732 7946 Co 7175 8519 Date -04-22	omcast Imp IS Ti	SP (Ime PM	ed a New Usage Comc Charging for a Receive Customer Care	Cap of ast not reported as the contract of the	of 300GB to ot working ary data I	Service go Specthat punish g and no so limits with State	t ed and hes ervice to h overage Zip.code
Customer.0 ## 1 250 Speeds ## 2 22 disconnece ## 3 24 Service ## 4 27 streaming ## 5 30 boot ## 6 33 fees ## Status ## 1 2015 Closed ## 2 Closed	Complai 0635 3441 ted 2732 7946 Co 7175 8519 Date -04-22 <na></na>	omcast Imp IS Ti 3:53:50 10:22:56	SP (Ime PM AM	ed a New Usage Comc Charging for a Receive Customer Care	Cap of ast no rbitra d.Via Call ernet	of 300GB to tworking ary data in City Abingdon Acworth	Service go Specthat punish g and no se Limits with State : Maryland Georgia	t ed and hes ervice to h overage Zip.code 21009 30102
Customer.0 ## 1 256 Speeds ## 2 22 disconnec ## 3 24 Service ## 4 27 streaming ## 5 30 boot ## 6 33 fees ## Status ## 1 2015 Closed ## 2 Closed ## 3 2015	Complai 0635 3441 ted 2732 7946 Co 7175 8519 Date -04-22 <na></na>	omcast Imp IS Ti 3:53:50 10:22:56	SP (Ime PM AM	ed a New Usage Comc Charging for a Receive Customer Care	Cap of ast no rbitra d.Via Call ernet	of 300GB to working ary data City Abingdon	Service go Specthat punish g and no se Limits with State : Maryland Georgia	t ed and hes ervice to h overage Zip.code 21009 30102
Customer.0 ## 1 256 Speeds ## 2 22: disconnect ## 3 24: Service ## 4 27 streaming ## 5 30 boot ## 6 33: fees ## Status ## 1 2015 Closed ## 2 Closed ## 3 2015 Closed	Compla: 0635 3441 ted 2732 7946 Co 7175 8519 Date -04-22 <na> -04-18</na>	omcast Imp IS Ti 3:53:50 10:22:56 9:55:47	SP (Lme PM AM	ed a New Usage Comc Charging for a Receive Customer Care Int	Cap of ast not reported as the contract of the	of 300GB to working ary data City Abingdon Acworth	Service go Specthat punish g and no so limits with State: Maryland Georgia Georgia	t ed and hes ervice to h overage Zip.code 21009 30102 30101
Customer.0 ## 1 256 Speeds ## 2 22: disconnece ## 3 24: Service ## 4 27 streaming ## 5 30 boot ## 6 33: fees ## Status ## 1 2015 Closed ## 2 Closed ## 3 2015 Closed ## 4	Compla: 0635 3441 ted 2732 7946 Co 7175 8519 Date -04-22 <na> -04-18</na>	omcast Imp IS Ti 3:53:50 10:22:56	SP (Lme PM AM	ed a New Usage Comc Charging for a Receive Customer Care Int	Cap of ast not reported as the contract of the	of 300GB to working ary data City Abingdon Acworth	Service go Specthat punish g and no se Limits with State : Maryland Georgia	t ed and hes ervice to h overage Zip.code 21009 30102 30101
Customer.0 ## 1 256 Speeds ## 2 22: disconnect ## 3 24: Service ## 4 27 streaming ## 5 30 boot ## 6 33: fees ## Status ## 1 2015 Closed ## 2 Closed ## 3 2015 Closed	Compla: 0635 3441 ted 2732 7946 Co . 7175 8519 Date -04-22 <na> -04-18 <na></na></na>	omcast Imp IS Ti 3:53:50 10:22:56 9:55:47 11:59:35	SP (me PM AM AM	ed a New Usage Comc Charging for a Receive Customer Care Interior	Cap of ast no rbitra d.Via Call ernet ernet	of 300GB for working ary data in City Abingdon Acworth Acworth	Service go Specthat punish g and no so limits with State: Maryland Georgia Georgia	t ed and hes ervice to h overage Zip.code 21009 30102 30101 30101

```
Solved
## 6
           <NA> 9:59:40 PM
                                      Internet Acworth Georgia
                                                                     30101
Solved
     Filing.on.Behalf.of.Someone FinalStatus
## 1
                              No
                                      Closed
## 2
                              No
                                      Closed
## 3
                             Yes
                                      Closed
## 4
                             Yes
                                        Open
## 5
                              No
                                      Closed
## 6
                                      Closed
                              No
summary(as.factor(complaint_status$FinalStatus))
## Closed
            0pen
             517
##
     1707
statewisecomp = table(complaint_status$FinalStatus,complaint_status$State)
statewisecomp = as.data.frame(statewisecomp)
head(statewisecomp)
##
       Var1
                Var2 Freq
## 1 Closed Alabama
                       17
                        9
## 2
       Open Alabama
## 3 Closed Arizona
                       14
## 4
       Open Arizona
                        6
## 5 Closed Arkansas
                        6
## 6
       Open Arkansas
                        0
library(ggplot2)
```

Number of complaints by Month



ggplot(statewisecomp,aes(x=Var2,y=Freq))+geom_bar(stat="identity")



```
Freq = table(complaint status$State,complaint status$FinalStatus)
Freq1 = as.data.frame(Freq)
Status_by_state = reshape(Freq1,idvar="Var1",timevar
='Var2', direction="wide")
Status by state Final = transform(Status by state, Unresolved Pct =
(Freq.Open/(Freq.Open+Freq.Closed)))
Status_by_state_Final
##
                        Var1 Freq.Closed Freq.Open Unresolved_Pct
## 1
                    Alabama
                                       17
                                                   9
                                                          0.34615385
## 2
                     Arizona
                                       14
                                                   6
                                                          0.30000000
                                                   0
## 3
                   Arkansas
                                        6
                                                          0.00000000
                                      159
## 4
                 California
                                                  61
                                                          0.27727273
## 5
                   Colorado
                                       58
                                                  22
                                                          0.27500000
## 6
                Connecticut
                                        9
                                                   3
                                                          0.25000000
                                        8
## 7
                   Delaware
                                                   4
                                                          0.33333333
##
  8
      District of Columbia
                                        1
                                                   0
                                                          0.00000000
                                                   2
## 9
      District Of Columbia
                                       14
                                                          0.12500000
                                                  39
## 10
                     Florida
                                      201
                                                          0.16250000
## 11
                    Georgia
                                      208
                                                  80
                                                          0.2777778
                                      135
                                                  29
## 12
                   Illinois
                                                          0.17682927
## 13
                                       50
                                                   9
                     Indiana
                                                          0.15254237
## 14
                                        1
                                                   0
                        Iowa
                                                          0.00000000
## 15
                      Kansas
                                        1
                                                   1
                                                          0.50000000
## 16
                                        4
                                                   3
                   Kentucky
                                                          0.42857143
                                       12
                                                   1
## 17
                  Louisiana
                                                          0.07692308
                                                   2
## 18
                                        3
                       Maine
                                                          0.40000000
## 19
                                                  15
                   Maryland
                                       63
                                                          0.19230769
## 20
                                       50
                                                  11
              Massachusetts
                                                          0.18032787
                                       92
                                                  23
## 21
                   Michigan
                                                          0.20000000
## 22
                                       29
                                                   4
                  Minnesota
                                                          0.12121212
## 23
                                                  16
                Mississippi
                                       23
                                                          0.41025641
## 24
                   Missouri
                                        3
                                                   1
                                                          0.25000000
## 25
                                        1
                                                   0
                    Montana
                                                          0.00000000
                                        1
                                                   0
## 26
                      Nevada
                                                          0.00000000
                                        8
                                                   4
## 27
              New Hampshire
                                                          0.33333333
                                                  19
## 28
                 New Jersey
                                       56
                                                          0.25333333
## 29
                 New Mexico
                                       11
                                                   4
                                                          0.26666667
                                                          0.00000000
## 30
                   New York
                                        6
                                                   0
## 31
             North Carolina
                                        3
                                                   0
                                                          0.00000000
## 32
                                        3
                                                   0
                        Ohio
                                                          0.00000000
## 33
                      Oregon
                                       36
                                                  13
                                                          0.26530612
                                                  20
## 34
               Pennsylvania
                                      110
                                                          0.15384615
## 35
               Rhode Island
                                                   0
                                        1
                                                          0.00000000
                                                   3
## 36
             South Carolina
                                       15
                                                          0.16666667
## 37
                  Tennessee
                                       96
                                                  47
                                                          0.32867133
## 38
                                       49
                                                  22
                       Texas
                                                          0.30985915
## 39
                        Utah
                                       16
                                                   6
                                                          0.27272727
## 40
                     Vermont
                                        2
                                                   1
                                                          0.33333333
```

```
## 41
                  Virginia
                                    49
                                              11
                                                     0.18333333
## 42
                                    75
                                              23
                Washington
                                                     0.23469388
## 43
             West Virginia
                                     8
                                               3
                                                     0.27272727
max(Status by state Final$Unresolved Pct)
## [1] 0.5
which(Status by state Final$Unresolved Pct == "0.5")
## [1] 15
Freq4 = table(complaint_status$Received.Via,complaint_status$FinalStatus)
Freq4 = as.data.frame(Freq4)
Status_by_Channel = reshape(Freq4,idvar="Var1",timevar
='Var2',direction="wide")
Status_by_Channel_Final = transform(Status_by_Channel,Unresolved_Pct =
(Freq.Open/(Freq.Open+Freq.Closed)))
head(Status_by_Channel_Final)
##
                   Var1 Freq.Closed Freq.Open Unresolved_Pct
## 1 Customer Care Call
                                864
                                                   0.2278820
                                          255
                                843
                                          262
## 2
               Internet
                                                   0.2371041
```