

## DESCRIPTIVE ANALYSIS ON ACCIDENT DATASET

### OBJECTIVE:

- In the dataset there are various accidents that occurred in different collisions like fallen from train, fire collisions, derailments etc. In that most accidents occurred by falling from train collisions, so there are most cases and also no deaths increased.
- In that dataset we are going to analyze the total no of deaths in different accidents in various states.

#### *#Installing Library*

```
library(ggplot2)
library(lattice)
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
```

#### *#Importing Dataset*

```
ds=read.csv("Train.CSV")
print(ds)
```

```
##           Category                               State.UT
## 1             State                Andhra Pradesh
## 2             State                Arunachal Pradesh
## 3             State                        Assam
## 4             State                        Bihar
## 5             State                Chhattisgarh
## 6             State                        Goa
## 7             State                Gujarat
## 8             State                Haryana
## 9             State                Himachal Pradesh
## 10            State                Jharkhand
## 11            State                Karnataka
## 12            State                Kerala
## 13            State                Madhya Pradesh
## 14            State                Maharashtra
## 15            State                Manipur
## 16            State                Meghalaya
## 17            State                Mizoram
## 18            State                Nagaland
## 19            State                Odisha
## 20            State                Punjab
## 21            State                Rajasthan
## 22            State                Sikkim
## 23            State                Tamil Nadu
## 24            State                Telangana
## 25            State                Tripura
## 26            State                Uttar Pradesh
## 27            State                Uttarakhand
```

## 28	State	West Bengal
## 29	State	Total (States)
## 30	UT	Andaman and Nicobar Islands

## 31	UT	Chandigarh
## 32	UT	Dadra and Nagar Haveli and Daman and Diu
## 33	UT	Delhi
## 34	UT	Jammu and Kashmir
## 35	UT	Ladakh
## 36	UT	Lakshadweep
## 37	UT	Puducherry
## 38	UT	Total (UTs)

## 39	Total (All India)	Total (All India)
-------	-------------------	-------------------

##	Collisions...Cases	Collisions...Injured	Collisions...Died
----	--------------------	----------------------	-------------------

## 1	0	0	0
## 2	0	0	0
## 3	0	0	0
## 4	3	0	3
## 5	0	0	0
## 6	0	0	0
## 7	0	0	0
## 8	0	0	0
## 9	0	0	0
## 10	11	0	11
## 11	0	0	0
## 12	0	0	0
## 13	0	0	0
## 14	0	0	0
## 15	0	0	0
## 16	0	0	0
## 17	0	0	0
## 18	0	0	0
## 19	0	0	0
## 20	0	0	0
## 21	0	0	0
## 22	0	0	0
## 23	0	0	0
## 24	0	0	0
## 25	0	0	0
## 26	74	0	72
## 27	0	0	0
## 28	0	0	0
## 29	88	0	86
## 30	0	0	0
## 31	0	0	0
## 32	0	0	0
## 33	0	0	0
## 34	0	0	0
## 35	0	0	0
## 36	0	0	0
## 37	0	0	0
## 38	0	0	0
## 39	88	0	86

##	Derailments...Cases	Derailments...Injured	Derailments...Died
----	---------------------	-----------------------	--------------------

## 1	0	0	0
## 2	0	0	0
## 3	0	0	0

## 4	0	0	0
## 5	0	0	0
## 6	0	0	0
## 7	0	0	0
## 8	0	0	0
## 9	0	0	0
## 10	16	6	17
## 11	0	0	0
## 12	0	0	0
## 13	0	0	0
## 14	0	0	0
## 15	0	0	0
## 16	0	0	0
## 17	0	0	0
## 18	0	0	0
## 19	0	0	0
## 20	0	0	0
## 21	0	0	0
## 22	0	0	0
## 23	0	0	0
## 24	0	0	0
## 25	0	0	0
## 26	5	0	5
## 27	0	0	0
## 28	0	0	0
## 29	21	6	22
## 30	0	0	0
## 31	0	0	0
## 32	0	0	0
## 33	0	0	0
## 34	0	0	0
## 35	0	0	0
## 36	0	0	0
## 37	0	0	0
## 38	0	0	0
## 39	21	6	22

# Fall.from.Train.Collision.with.People.at.Tracks...Cases

## 1	750
## 2	0
## 3	459
## 4	1109
## 5	273
## 6	49
## 7	571
## 8	466
## 9	0
## 10	238

## 11	0
## 12	131
## 13	586
## 14	3285
## 15	0
## 16	0
## 17	0
## 18	0
## 19	165
## 20	23
## 21	613
## 22	0
## 23	1407

## 24	408
## 25	4
## 26	1602
## 27	25
## 28	17
## 29	12181
## 30	0
## 31	0
## 32	0
## 33	0
## 34	0
## 35	0
## 36	0
## 37	0
## 38	0
## 39	12181
## Fall.from.Train.Collision.with.People.at.Tracks...Injured	
## 1	0
## 2	0
## 3	0
## 4	47
## 5	0
## 6	0
## 7	1
## 8	9
## 9	0
## 10	14
## 11	0
## 12	0
## 13	0
## 14	816
## 15	0
## 16	0
## 17	0
## 18	0
## 19	0
## 20	0

## 21	17
## 22	0
## 23	107
## 24	0
## 25	0
## 26	256
## 27	0
## 28	12
## 29	1279
## 30	0
## 31	0
## 32	0
## 33	0
## 34	0
## 35	0
## 36	0
## 37	0
## 38	0
## 39	1279
## Fall.from.Train.Collision.with.People.at.Tracks...Died	
## 1	755
## 2	0
## 3	459

## 4	1111
## 5	272
## 6	49
## 7	579
## 8	457
## 9	0
## 10	224
## 11	0
## 12	132
## 13	586
## 14	2473
## 15	0
## 16	0
## 17	0
## 18	0
## 19	165
## 20	23
## 21	599
## 22	0
## 23	1300
## 24	412
## 25	5
## 26	1399
## 27	29
## 28	7
## 29	11036
## 30	0

## 31	0		
## 32	0		
## 33	0		
## 34	0		
## 35	0		
## 36	0		
## 37	0		
## 38	0		
## 39	11036		
##	Explosion.Fire...Cases	Explosion.Fire...Injured	Explosion.Fire...Died
## 1	0	0	0
## 2	0	0	0
## 3	0	0	0
## 4	0	0	0
## 5	0	0	0
## 6	0	0	0
## 7	0	0	0
## 8	0	0	0
## 9	0	0	0
## 10	0	0	0
## 11	0	0	0
## 12	0	0	0
## 13	0	0	0
## 14	0	0	0
## 15	0	0	0
## 16	0	0	0
## 17	0	0	0
## 18	0	0	0
## 19	0	0	0
## 20	0	0	0
## 21	0	0	0
## 22	0	0	0
## 23	0	0	0

## 24	0	0	0
## 25	0	0	0
## 26	0	0	0
## 27	0	0	0
## 28	0	0	0
## 29	0	0	0
## 30	0	0	0
## 31	0	0	0
## 32	0	0	0
## 33	0	0	0
## 34	0	0	0
## 35	0	0	0
## 36	0	0	0
## 37	0	0	0
## 38	0	0	0
## 39	0	0	0
## Others...Cases	Others...Injured	Others...Died	Total...Cases

Total...Injured				
## 1	5	0	5	755
0				
## 2	0	0	0	0
0				
## 3	0	0	0	459
0				
## 4	35	0	37	1147
47				
## 5	139	0	140	412
0				
## 6	0	0	0	49
0				
## 7	0	0	0	571
1				
## 8	340	7	333	806
16				
## 9	0	0	0	0
0				
## 10	19	0	19	284
20				
## 11	0	0	0	0
0				
## 12	40	0	40	171
0				
## 13	492	0	493	1078
0				
## 14	203	141	62	3488
957				
## 15	0	0	0	0
0				
## 16	0	0	0	0
0				
## 17	0	0	0	0
0				
## 18	0	0	0	0
0				
## 19	141	94	141	306
94				

## 20	592	40	553	615
40				
## 21	56	0	56	669
17				
## 22	0	0	0	0
0				
## 23	0	0	0	1407
107				
## 24	0	0	0	408
0				
## 25	0	0	0	4

0				
## 26	542	25	568	2223
281				
## 27	0	0	0	25
0				
## 28	2408	134	2275	2425
146				
## 29	5012	441	4722	17302
1726				
## 30	0	0	0	0
0				
## 31	0	0	0	0
0				
## 32	0	0	0	0
0				
## 33	676	126	550	676
126				
## 34	15	0	15	15
0				
## 35	0	0	0	0
0				
## 36	0	0	0	0
0				
## 37	0	0	0	0
0				
## 38	691	126	565	691
126				
## 39	5703	567	5287	17993
1852				

## Total...Died

## 1	760
## 2	0
## 3	459
## 4	1151
## 5	412
## 6	49
## 7	579
## 8	790
## 9	0
## 10	271
## 11	0
## 12	172
## 13	1079
## 14	2535
## 15	0
## 16	0
## 17	0
## 18	0

```
## 19      306
## 20      576
```

```
## 21      655
## 22        0
## 23     1300
## 24      412
## 25        5
## 26     2044
## 27        29
## 28     2282
## 29    15866
## 30        0
## 31        0
## 32        0
## 33     550
## 34       15
## 35        0
## 36        0
## 37        0
## 38     565
## 39    16431
```

### #1.Data Preprocesssing

```
head(ds)
```

```
##      Category      State.UT Collisions...Cases Collisions...Injured
## 1      State  Andhra Pradesh              0              0
## 2      State Arunachal Pradesh              0              0
## 3      State              Assam              0              0
## 4      State              Bihar              3              0
## 5      State  Chhattisgarh              0              0
## 6      State              Goa              0              0
```

```
## Collisions...Died Derailments...Cases Derailments...Injured
## 1              0              0              0
## 2              0              0              0
## 3              0              0              0
## 4              3              0              0
## 5              0              0              0
## 6              0              0              0
```

```
## Derailments...Die
Fall.d on.with.People.at.Tracks...Cases
from.Train.Collis
i
```

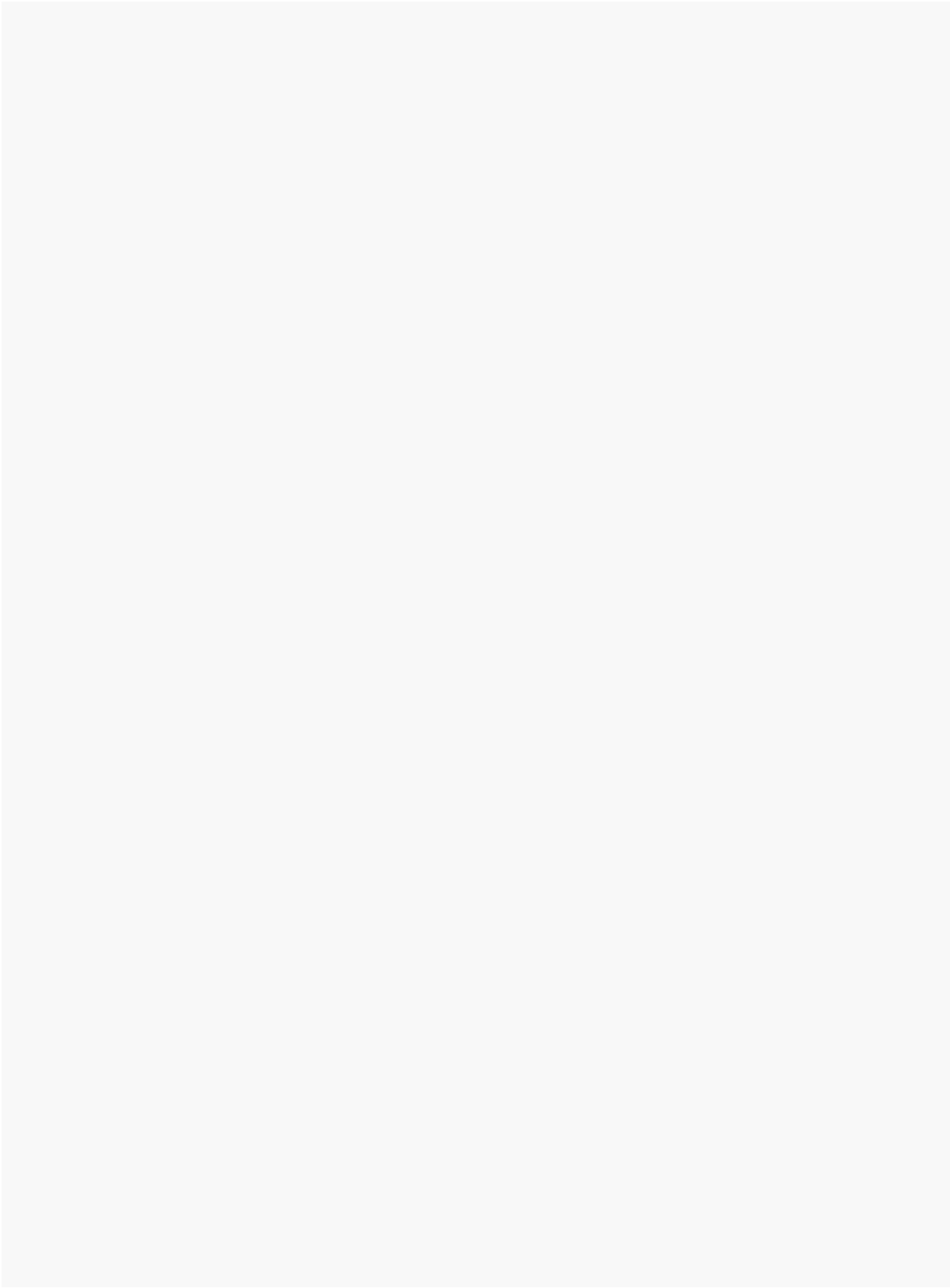
```
## 1              0
750
## 2              0
0
## 3              0
459
## 4              0
1109
## 5              0
273
## 6              0
```

```
49
## Fall.from.Train.Collision.with.People.at.Tracks...Injured
## 1              0
```



## 2	0
## 3	0
## 4	47
## 5	0
## 6	0
## Fall.from.Train.Collision.with.People.at.Tracks...Died	
Explosion.Fire...Cases	
## 1	755
0	
## 2	0
0	
## 3	459
0	
## 4	1111
0	
## 5	272
0	
## 6	49
0	
## Explosion.Fire...Injured Explosion.Fire...Died Others...Cases	
## 1	0 0 5
## 2	0 0 0
## 3	0 0 0
## 4	0 0 35
## 5	0 0 139
## 6	0 0 0
## Others...Injured Others...Died Total...Cases Total...Injured	

## 35	UT	Ladakh	0
0			
## 36	UT	Lakshadweep	0
0			
## 37	UT	Puducherry	0
0			
## 38	UT	Total (UTs)	0
0			
## 39	Total (All India)	Total (All India)	88
0			
##	Collisions...Died	Derailments...Cases	Derailments...Injured
## 34	0	0	0
## 35	0	0	0
## 36	0	0	0
## 37	0	0	0
## 38	0	0	0
## 39	86	21	6
##	Derailments...Died		
##	Fall.from.Train.Collisi	n.with.People.at.Tracks...Cases	
0			
## 34	0		
0			
## 35	0		
0			
## 36	0		
0			
## 37	0		
0			
## 38	0		
0			
## 39	22		
12181			
##	Fall.from.Train.Collision.with.People.at.Tracks...Injured		
## 34		0	
## 35		0	
## 36		0	
## 37		0	
## 38		0	
## 39		1279	
##	Fall.from.Train.Collision.with.People.at.Tracks...Died		
## 34		0	
## 35		0	
## 36		0	
## 37		0	
## 38		0	
## 39		11036	
##	Explosion.Fire...Cases	Explosion.Fire...Injured	Explosion.Fire...Died
## 34	0	0	0
## 35	0	0	0
## 36	0	0	0
## 37	0	0	0



## 38 0

## 39 0 0 0

## Others...Cases Others...Injured Others...Died Total...Cases  
Total...Injured

## 34 15 0 15 15

0

## 35 0 0 0 0

0

## 36 0 0 0 0

0

```
## 37          0          0          0          0
0
## 38          691          126          565          691
126
## 39          5703          567          5287          17993
1852
##      Total...Died ## 34
15
## 35          0
## 36          0
## 37          0
## 38          565
## 39          16431
```

*#Renaming a column*

```
ds=rename(ds,State=Category) head(ds)
```

```
##      State          State.UT Collisions...Cases Collisions...Injured ## 1
State          Andhra Pradesh          0          0
## 2 State Arunachal Pradesh          0          0
## 3 State          Assam          0          0
## 4 State          Bihar          3          0
## 5 State          Chhattisgarh          0          0
## 6 State          Goa          0          0
```

```
##      Collisions...Died Derailments...Cases Derailments      Injured
## 1          0          0          0
## 2          0          0          0
## 3          0          0          0
## 4          3          0          0
## 5          0          0          0
## 6          0          0          0
```

```
##      Derailments      Died
Fall.from.Train.Collision.with.People.at.Tracks      Cases
```

```
## 1          0
750
## 2          0
0
## 3          0
459
```

```
## 4          0
1109
## 5          0
273
## 6          0
49
```

```
##      Fall.from.Train.Collision.with.People.at.Tracks...Injured
```

```
## 1          0
## 2          0
## 3          0
## 4          47
## 5          0
## 6          0
```

```
##      Fall.from.Train.Collision.with.People.at.Tracks...Died
Explosion.Fire...Cases
```

```
## 1          755
0
## 2          0
0
3          459
```

```
##
0
## 4 1111
0
## 5 272
0
## 6 49
0
## Explosion.Fire...Injured Explosion.Fire...Died Others...Cases
## 1 0 0 5
## 2 0 0 0
## 3 0 0 0
## 4 0 0 35
## 5 0 0 139
## 6 0 0 0
## Others...Injured Others...Died Total...Cases Total...Injured
```

#### #Dimension

```
dim(ds)
```

```
## [1] 39 20
```

#### #Summarizing

##### Data

```
#ummar St State Collisions...Cas
Collisions...Inju .UT es
#ed Length:39 Length:39 M : Min.
# Class Class 1st Qu.: 1st
# Mode: acharacter Mode::character 0.000 Qu.:0
Mean : 6.769 Mean 0
3rd Qu.: 0.000 3rd
Qu.:0 Max. :88.000
Max. 0
Collisions...Died Derailments...Cases Derailments Injured
## ents:Died Min. : Min.
Min. 0.00 0.000 :0.0000 Min.
0.000 0 :
#
#
#
```

```
## 1st Qu.: 0.000 1st Qu.: 0.000 1st Qu.:0.0000 1st Qu.:
0.000
## Median : 0.000 Median : 0.000 Median :0.0000 Median :
0.000
## Mean : 6.615 Mean : 1.615 Mean :0.4615 Mean :
1.692
## 3rd Qu.: 0.000 3rd Qu.: 0.000 3rd Qu.:0.0000 3rd Qu.:
0.000
## Max. :86.000 Max. :21.000 Max. :6.0000 Max.
:22.000
## Fall.from.Train.Collision.with.People.at.Tracks...Cases
## Min. : 0.0
## 1st Qu.: 0.0
## Median : 23.0
## Mean : 937.0
## 3rd Qu.: 518.5
## Max. :12181.0
## Fall.from.Train.Collision.with.People.at.Tracks...Injured
## Min. : 0.00
## 1st Qu.: 0.00
## Median : 0.00
## Mean : 98.38
## 3rd Qu.: 5.00
## Max. :1279.00
```

```
## Fall.from.Train.Collision.with.People.at.Tracks...Died
Explosion.Fire...Cases
## Min.      :    0.0                      Min.      :0
## 1st Qu.:    0.0                      1st Qu.:0
## Median :   23.0                      Median :0
## Mean    :  848.9                      Mean     0

## 3rd Qu.: 519.0                      3rd Qu.:0
## Max.    :11036.0                    Max.      0
## Explosion.Fire...Injured Explosion.Fire...Died Others...Cases
## Min.      :0                      Min.      :0      Min.      :    0.0
## 1st Qu.:0                      1st Qu.:0      1st Qu.:    0.0
## Median :0                      Median :0      Median :    0.0
## Mean     :0                      Mean      :0      Mean      :  438.7
## 3rd Qu.:0                      3rd Qu.:0      3rd Qu.:  172.0
## Max.     :0                      Max.      :0      Max.      :5703.0
## Others...Injured Others...Died Total...Cases Total...Injured
## Min.      : 0.00    Min.      :    0.0    Min.      :    0    Min.      :    0.0
## 1st Qu.: 0.00    1st Qu.:    0.0    1st Qu.:    0    1st Qu.:    0.0
## Median : 0.00    Median :    0.0    Median :  284    Median :    0.0
## Mean     : 43.62    Mean      : 406.7    Mean      : 1384    Mean      : 142.5
## 3rd Qu.: 3.50    3rd Qu.: 140.5    3rd Qu.:  723    3rd Qu.:   43.5
## Max.     :567.00    Max.      :5287.0    Max.      :17993    Max.      :1852.0
## Total...Died ## Min.      :
## 0.0
## 1st Qu.:    0.0
## Median : 271.0
## Mean     : 1263.9 ## 3rd
Qu.: 707.5
## Max.     :16431.0

#Choosing Index sample_index=sample(1:nrow(ds),20,replace =
FALSE) sample_index

## [1] 39 16 5 36 18 6 9 19 24 22 37 12 3 26 10 32 11 30 25 15

#Structure Display
str(ds)

## 'data.frame':    39 obs. of 20 variables:
## $ State                      : chr "State"
## State "State" "State" ...
## $ State.UT                   : chr "Andhra
Pradesh" "Arunachal Pradesh" "Assam" "Bihar" ...
## $ Collisions...Cases         : int  0 0 0 3
0 0 0 0 0 11 ...
## $ Collisions...Injured       : int  0 0 0 0
0 0 0 0 0 0 ...
## $ Collisions...Died          : int  0 0 0 3
0 0 0 0 0 11 ...
## $ Derailments...Cases        : int  0 0 0 0
0 0 0 0 0 16 ...
## $ Derailments...Injured      : int  0 0 0 0
0 0 0 0 0 6 ...
## $ Derailments...Died         : int  0 0 0 0
0 0 0 0 0 17 ...
## $ Fall.from.Train.Collision.with.People.at.Tracks...Cases : int  750 0
```

```
459 1109 273 49 571 466 0 238 ...
## $ Fall.from.Train.Collision.with.People.at.Tracks...Injured: int 0 0 0
47 0 0 1 9 0 14 ...
## $ Fall.from.Train.Collision.with.People.at.Tracks...Died : int 755 0
459 1111 272 49 579 457 0 224 ...
## $ Explosion.Fire...Cases : int 0 0 0 0
0 0 0 0 0 0 ...
## $ Explosion.Fire...Injured : int 0 0 0 0
0 0 0 0 0 0 ...
## $ Explosion.Fire...Died : int 0 0 0 0
0 0 0 0 0 0 ...
## $ Others...Cases : int 5 0 0
35 139 0 0 340 0 19 ...
## $ Others...Injured : int 0 0 0 0
0 0 0 7 0 0 ...
## $ Others...Died : int 5 0 0
37 140 0 0 333 0 19 ...
## $ Total...Cases : int 755 0
```

```
459 1147 412 49 571 806 0 284
...
## $
Total...Injured 47
0 0 1 16 0 20 ...
## $ Total...Died
```

```
459 1151 412 49 579 0 27 ...
790 1
```

#Filter

f=ds%>%

filter(Total...Cases<=100)

head(f)

```
## State State.UT Collisions...Cases Collisions...Injured
## 1 State Arunachal Pradesh 0 0
## 2 State Goa 0 0
## 3 State Himachal Pradesh 0 0
## 4 State Karnataka 0 0
## 5 State Manipur 0 0
## 6 State Meghalaya 0 0
```

```
## Collisions...Died Derailments...Case Derailments...Injured
## 1 0 5 0
```

```
## 2 0 0 0
## 3 0 0 0
## 4 0 0 0
## 5 0 0 0
## 6 0 0 0
```

```
##
Derailments...Died on.with.People.at.Tracks...Cases
Fall.from.Train.Collis
```

```
i
## 1 0
0
## 2 0
49
## 3 0
```

```
0
## 4 0
```

```

0
## 5          0
0
## 6          0
0
## Fall.from.Train.Collision.with.People.at.Tracks...Injured
## 1          0
## 2          0
## 3          0
## 4          0
## 5          0
## 6          0
## Fall.from.Train.Collision.with.People.at.Tracks...Died
Explosion.Fire...Cases
## 1          0
0
## 2          49
0
## 3          0
0
## 4          0
0
## 5          0
0
## 6          0
0
## Explosion.Fire...Injured Explosion.Fire...Died Others...Cases
## 1          0          0          0
## 2          0          0          0
## 3          0          0          0
## 4          0          0          0
## 5          0          0          0
## 6          0          0          0
## Others...Injured Others...Died Total...Cases Total...Injured
Total...Died
## 1          0          0          0          0
0
## 2          0          0          49          0
49
## 3          0          0          0          0
0
## 4          0          0          0          0
0
## 5          0          0          0          0
0
## 6          0          0          0          0
0

```

#### *#Subset of Data*

```

ds_subset=ds%>%
select(State,Collisions...Cases,Collisions...Died,Derailments...Died,Others
**
.Cases,Others...Died,Total...Died)
head(ds_subset)

```

```

## State Collisions...Cases Collisions...Died
Derailments...Died Others...Cases

```

```

## 1 State          0          0          0
5
## 2 State          0          0          0
0

```



```
## 3 State          0          0          0
0
## 4 State          3          3          0
35
## 5 State          0          0          0
139
## 6 State          0          0          0
0
## Others...Died Total...Died
## 1          5        760
## 2          0          0
## 3          0        459
## 4         37       1151
## 5        140        412
## 6          0         49
```

### *#Subset of Total Died Column*

```
ds_Total...Died=ds%>%
select(Total...Died)
head(ds_Total...Died)
```

```
## Total...Died
## 1        760
## 2          0
## 3        459
## 4       1151
## 5        412
## 6         49
```

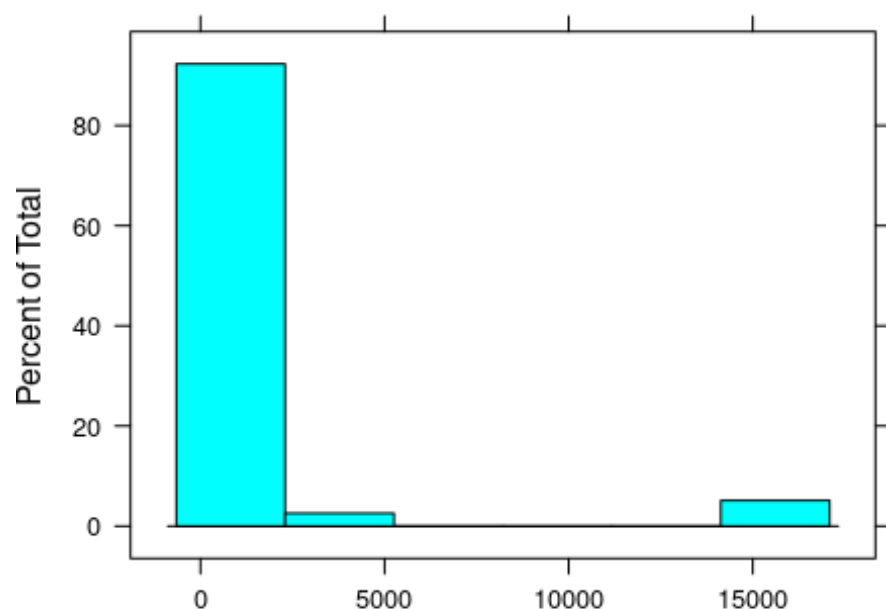
### *#Summary the Total...Died*

```
summary(ds_Total...Died)
```

```
## Total...Died
## Min.   :  0.0
## 1st Qu.:  0.0
## Median : 271.0
## Mean   : 1263.9
## 3rd Qu.: 707.5
## Max.   :16431.0
```

### *#2 Histogram*

```
histogram(~Total...Died,data = ds_Total...Died)
```

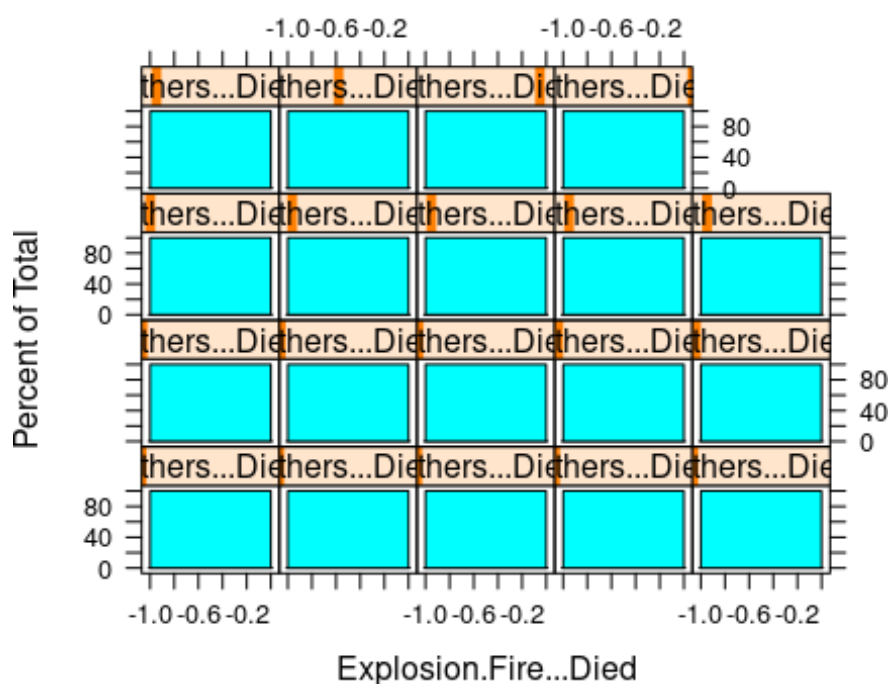


```
Total...Died
## 1      0      5      755      0
760
## 2      0      0      0      0
0
## 3      0      0      459      0
459
## 4      0      37     1147     47
1151
## 5      0     140      412      0
412
## 6      0      0      49      0
49
```

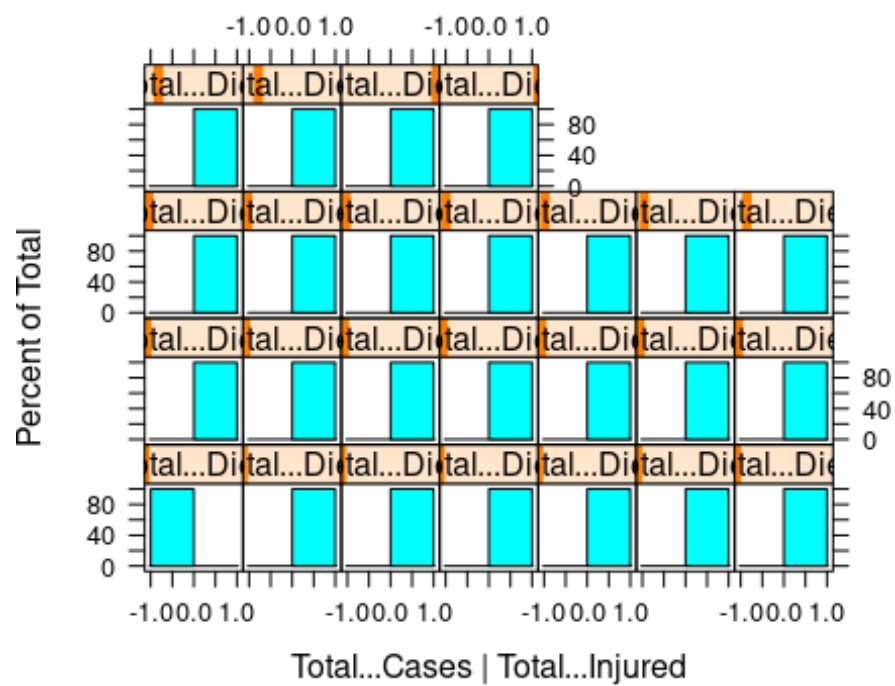
```
tail(ds)
```

```
##          Category      State.UT
Collisions...Cases Collisions...Injured
## 34          UT Jammu and Kashmir      0
0
Total...Died
## 1      0      5      755      0
760
## 2      0      0      0      0
0
## 3      0      0      459      0
459
## 4      0      37     1147      4
1151      7
## 5      0     140      412      0
412
## 6      0      0      49      0
49
```

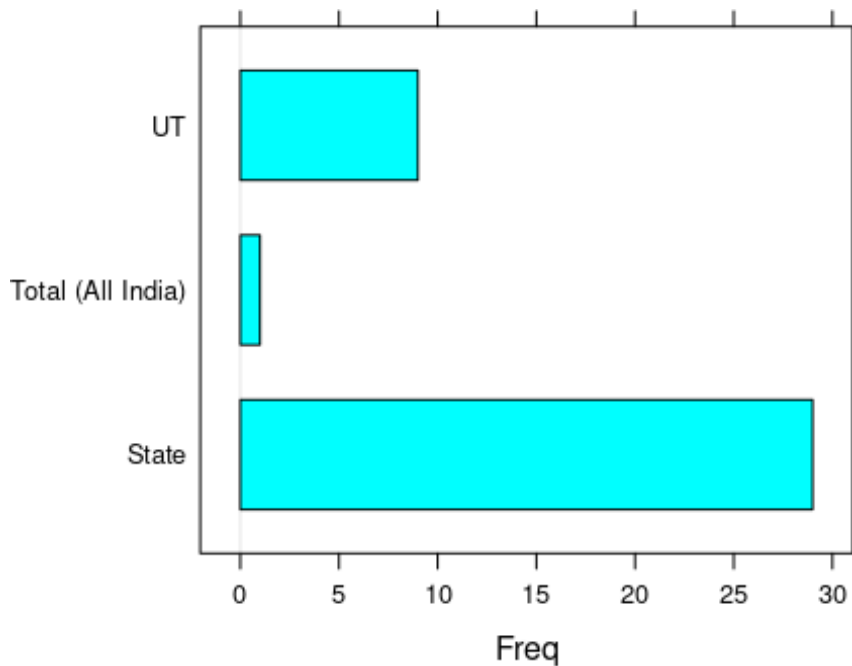
```
histogram(~Explosion.Fire...Died|Others...Died,data = ds,breaks = 500)
```



```
histogram(~Total...Cases|Total...Injured|Total...Died,data = ds,breaks = 400)
```



```
barchart(ds["State"])
```



*#Subsetting Highest Data*

```
State=subset(ds,State=="State")
```

*#Subsetting Lowest Data*

```
count(unique(State["State.UT"]))
```

```
##      n
```

```
## 1 29
```

histogram

```
## function (x, data,
```

```
...) ##
```

```
UseMethod("histogram")
```

```
## <bytecode: 0x559797348d40>
```

```
## <environment: namespace:lattice>
```

*#Boxplot*

```
f1=ds%>%
```

```
filter(Total...Died<=100)
```

```
head(f1)
```

```
##      State      State.UT Collisions...Cases Collisions...Injured
## 1 State Arunachal Pradesh          0          0
## 2 State              Goa          0          0
## 3 State Himachal Pradesh          0          0
## 4 State      Karnataka          0          0
## 5 State      Manipur          0          0
## 6 State      Meghalaya          0          0
## Collisions...Died Derailments...Cases Derailments Injured
```

```
## 1          0          0          0
## 2          0          0          0
## 3          0          0          0
## 4          0          0          0
## 5          0          0          0
## 6          0          0          0
```

```
## Derailments...Died
```

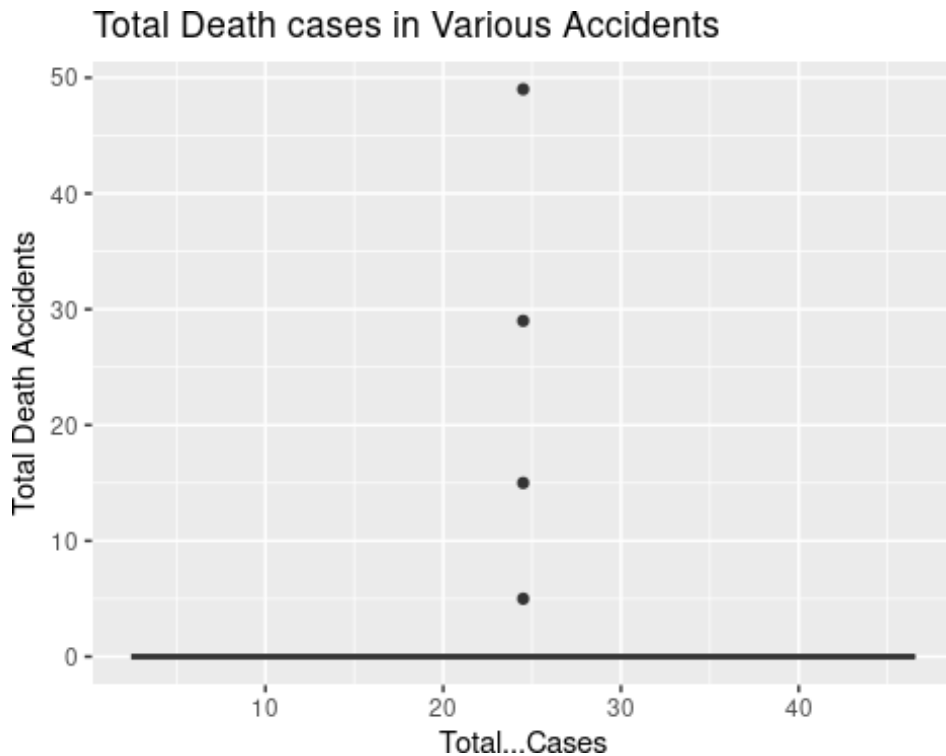
```
Fall.from.Train.Collision.with. eople.at.Tracks...Cases
```

```
p
```

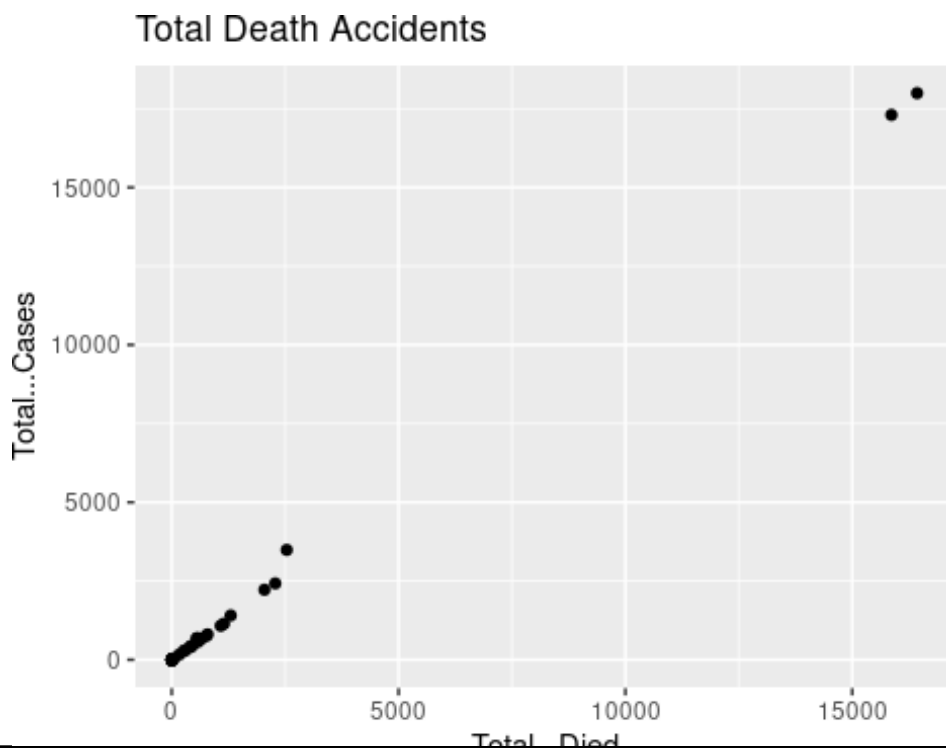
## 1	0
0	
## 2	0
49	
## 3	0
0	
## 4	0
0	
## 5	0
0	
## 6	0
0	
## Fall.from.Train.Collision.with.People.at.Tracks...Injured	
## 1	0
## 2	0
## 3	0
## 4	0
## 5	0
## 6	0
## Fall.from.Train.Collision.with.People.at.Tracks...Died	
Explosion.Fire...Cases	
## 1	0
0	
## 2	49
0	
## 3	0
0	
## 4	0
0	
## 5	0
0	
## 6	0
0	
## Explosion.Fire...Injured Explosion.Fire...Died Others...Cases	
## 1	0 0 0
## 2	0 0 0
## 3	0 0 0
## 4	0 0 0
## 5	0 0 0
## 6	0 0 0
## Others...Injured Others...Died Total...Cases Total...Injured	
Total...Died	

## 1	0	0	0	0
0				
## 2	0	0	49	0
49				
## 3	0	0	0	0
0				
## 4	0	0	0	0
0				
## 5	0	0	0	0
0				
## 6	0	0	0	0
0				

```
library(tidyr)
#Boxplot
Train_long=pivot_longer(f1,cols = c("Total...Died"),names_to =
"Measure",values_to = "Value")
ggplot(Train_long,aes(x=Total...Cases,y=Value,group="Total...Cases"))+
geom_boxplot()+
labs(title = "Total Death cases in Various Accidents",
x="Total...Cases",
y="Total Death Accidents")
```



```
#Scatterplot
ggplot(ds,aes(x=Total...Died,y=Total...Cases))+
geom_point()+
labs(title = "Total Death
Accidents",
x="Total...Died",y="Total...Cases")
}
```



#### INFERENCE:

- In the Accident dataset total number of deaths occurred in right skewed.
- Most of the accidents occurred in fire explosions in different states.
- Most accidents occurred in train collisions.

#### INSIGHT:

- In the dataset there are total number of deaths that occurred during accidents. The most death takes place in different states/UT, State.
- Total cases occurred in various accidents like Fallen from train, other cases. In that to find the total no of deaths occurred in which accidents.

