

Vehicular.R

shaun

2021-12-12

```
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
```

```
library(ggplot2)
```

```
setwd("C:\\Users\\shaun\\OneDrive\\Desktop\\Academics\\Sem-5\\Foundation of Data Analytics 3505\\J-comp")
```

```
# Accidents due to vehicular defects
```

```
vehicular_defect = read.csv("Vehicular_defects.csv")
```

```
vehicular_defect = vehicular_defect[1:36,2:32]
```

```
vehicular_defect = vehicular_defect %>% arrange(State..UT)
```

```
vehicular_defect = vehicular_defect[-c(9,6,10,8),]
```

```
View(vehicular_defect)
```

```
sum(is.na(vehicular_defect))
```

```
## [1] 0
```

```
dim(vehicular_defect)
```

```
## [1] 32 31
```

```
colnames(vehicular_defect)
```

```
## [1] "State..UT"
```

```
## [2] "Defective.brakes...Number.of.Accident...2014"
```

```
## [3] "Defective.brakes...Persons.Killed...2014"
```

```
## [4] "Defective.brakes...Persons.Injured...2014"
```

```
## [5] "Defective.Steering...Number.of.Accident...2014"
```

```
## [6] "Defective.Steering...Persons.Killed...2014"
```

```
## [7] "Defective.Steering...Persons.Injured...2014"
## [8] "Punctured.burst.Tyres...Number.of.Accident...2014"
## [9] "Punctured.burst.Tyres...Persons.Killed...2014"
## [10] "Punctured.burst.Tyres...Persons.Injured...2014"
## [11] "Bald.Tyres...Number.of.Accident...2014"
## [12] "Bald.Tyres...Persons.Killed...2014"
## [13] "Bald.Tyres...Persons.Injured...2014"
## [14] "Other.serious.mechanical.defect...Number.of.Accident...2014"
## [15] "Other.serious.mechanical.defect...Persons.Killed...2014"
## [16] "Other.serious.mechanical.defect...Persons.Injured...2014"
## [17] "Defective.brakes...Number.of.Accidents...2016"
## [18] "Defective.brakes...Persons.Killed...2016"
## [19] "Defective.brakes...Persons.Injured...2016"
## [20] "Defective.Steering.Axil...Number.of.Accidents...2016"
## [21] "Defective.Steering.Axil...Persons.Killed...2016"
## [22] "Defective.Steering.Axil...Persons.Injured...2016"
## [23] "Punctured.burst.Tyres...Number.of.Accidents...2016"
## [24] "Punctured.burst.Tyres...Persons.Killed...2016"
## [25] "Punctured.burst.Tyres...Persons.Injured...2016"
## [26] "Worn.out.Tyres...Number.of.Accidents...2016"
## [27] "Worn.out.Tyres...Persons.Killed...2016"
## [28] "Worn.out.Tyres...Persons.Injured...2016"
## [29] "Other.serious.mechanical.defect...Number.of.Accidents...2016"
## [30] "Other.serious.mechanical.defect...Persons.Killed...2016"
## [31] "Other.serious.mechanical.defect...Persons.Injured...2016"
```

```
rownames(vehicular_defect) <- vehicular_defect$State..UT
```

```
states = seq(1:32)
```

```
vehicular_defect$Total_2014 = 0
```

```
vehicular_defect$Total_2016 = 0
```

```
total_nums1 = seq(2,16,3)
```

```
total_nums2 = seq(17,32,3)
```

```
for (i in states)
```

```
{
```

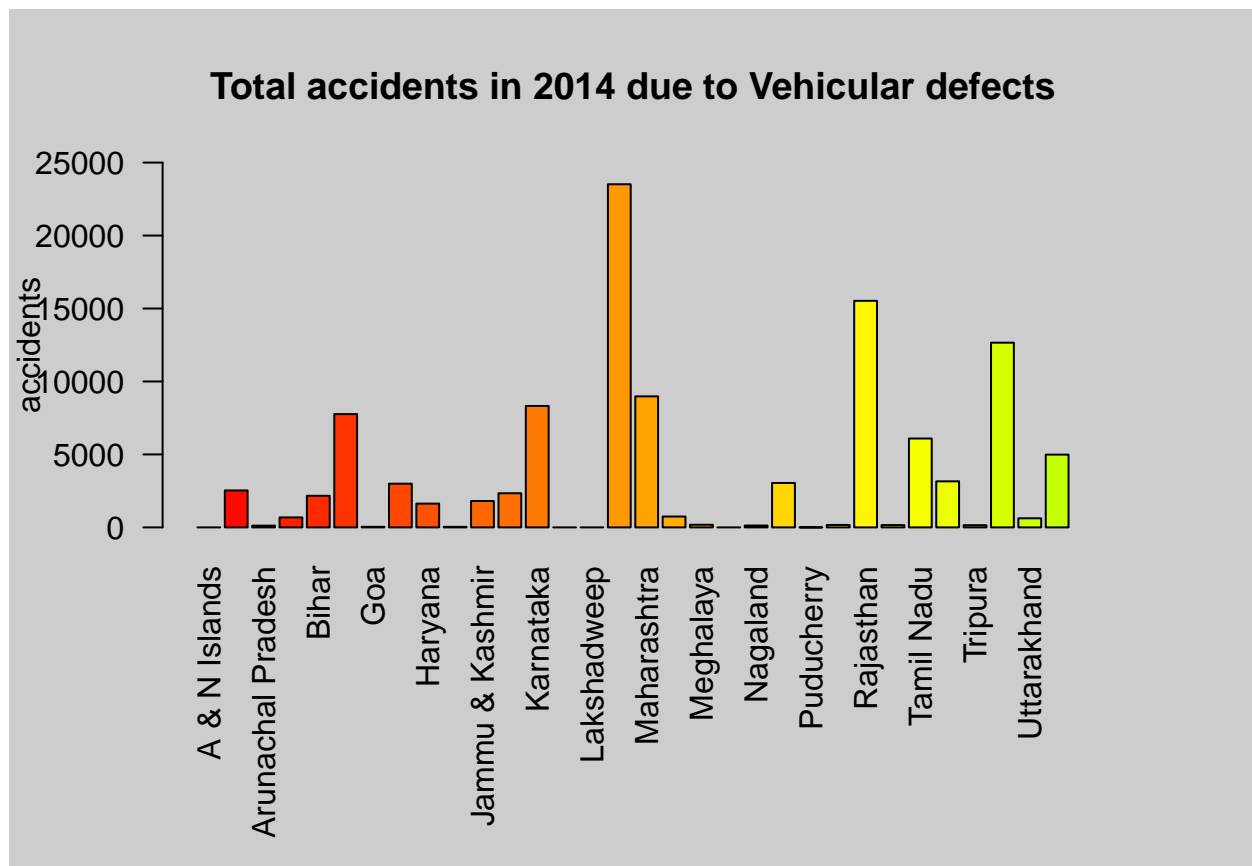
```
  vehicular_defect$Total_2014[i] = sum(vehicular_defect[i,total_nums1])
```

```
  vehicular_defect$Total_2016[i] = sum(vehicular_defect[i,total_nums2])
```

```
}
```

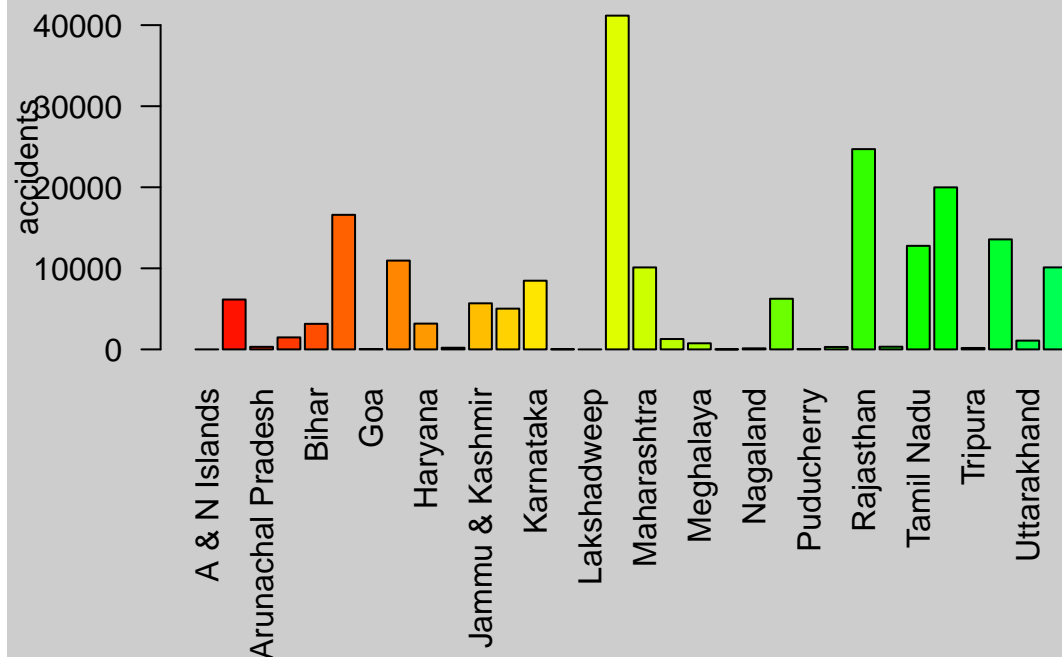
```
par(mar = c(9,4,4,4), bg="#CDCDCD")
```

```
barplot(vehicular_defect$Total_2014, main = "Total accidents in 2014 due to Vehicular defects" ,ylab="a
```



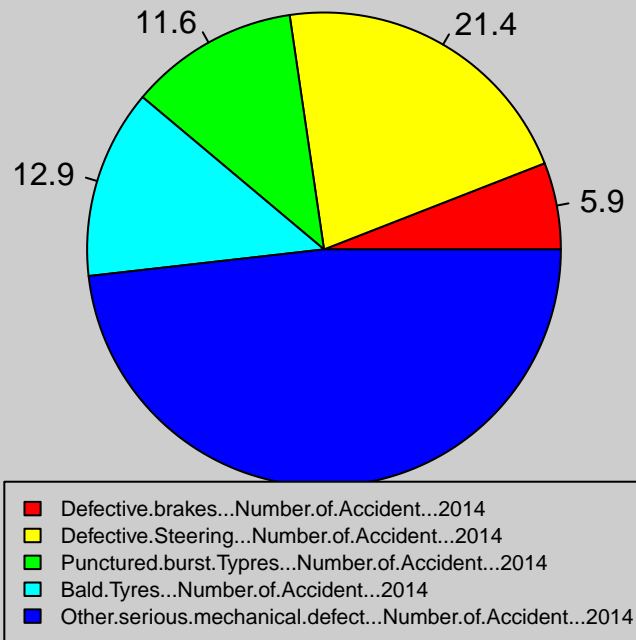
```
barplot(vehicular_defect$Total_2016, main = "Total accidents in 2016 due to Vehicular defects", ylab="a
```

Total accidents in 2016 due to Vehicular defects

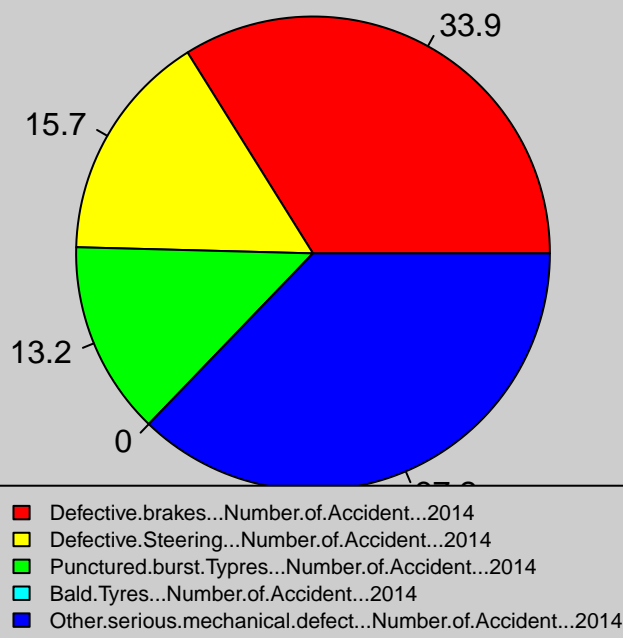


```
labs = colnames(vehicular_defect)[total_nums1]
for (i in seq(3:34))
{
  par(mar = c(0,2,2,2), bg="#CDCDCD")
  v=as.numeric(as.vector(vehicular_defect[i,total_nums1]))
  if(sum(v)!=0)
  {
    piepercent<- round(100*v/sum(v), 1)
    pie(v,radius = 0.65,labels = piepercent, main=vehicular_defect[i,1],col = rainbow(6))
    legend("bottom", labs, cex = 0.7, fill = rainbow(6))
  }
}
```

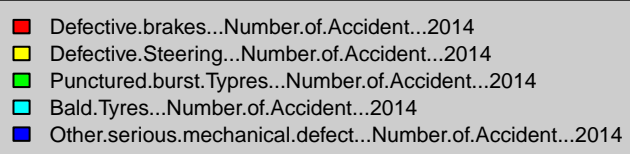
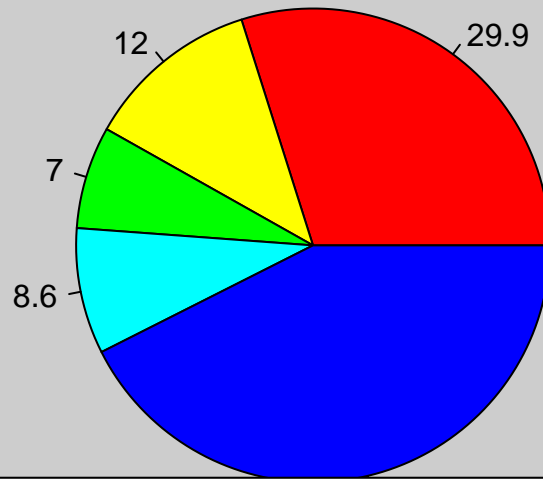
Andhra Pradesh



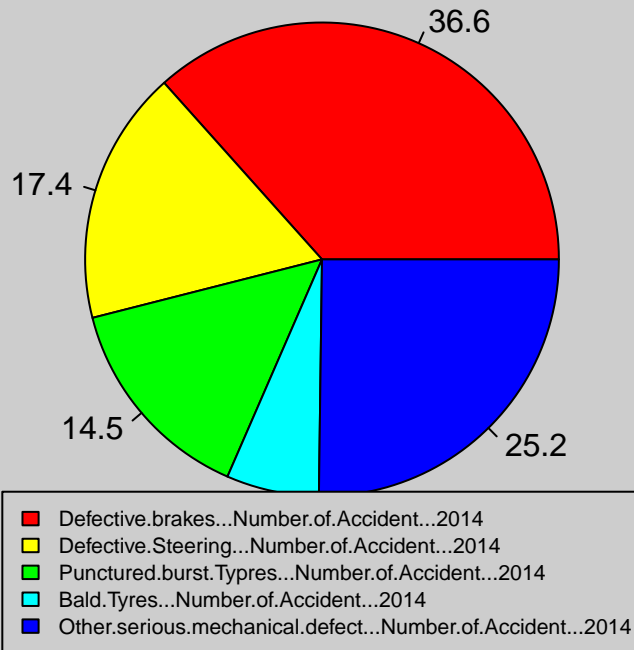
Arunachal Pradesh



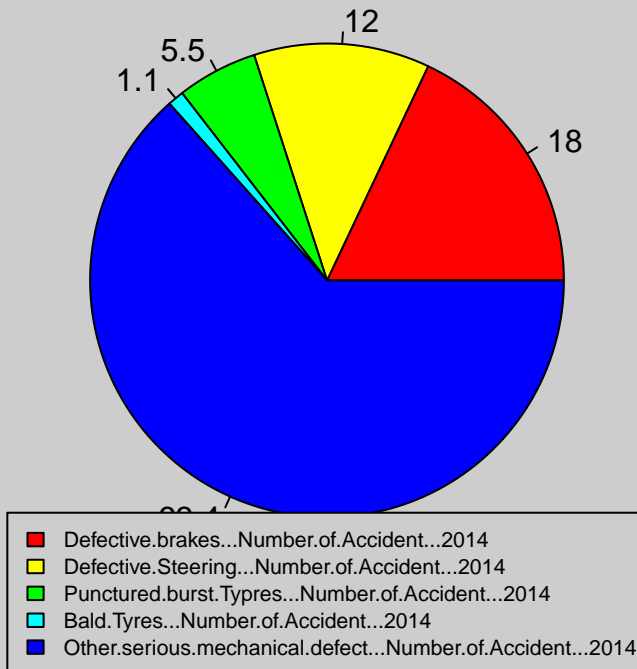
Assam



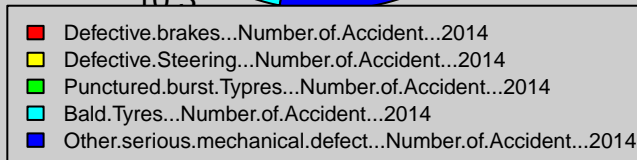
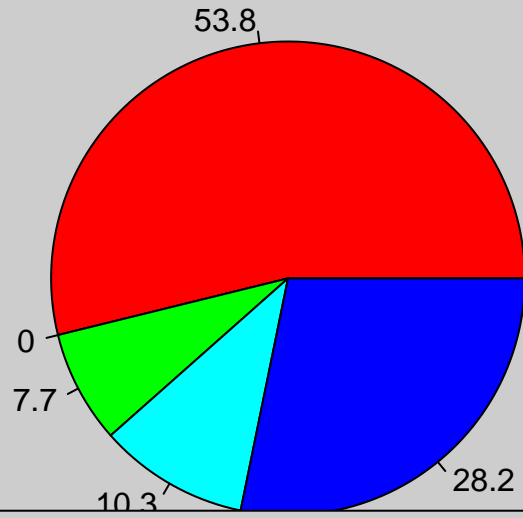
Bihar



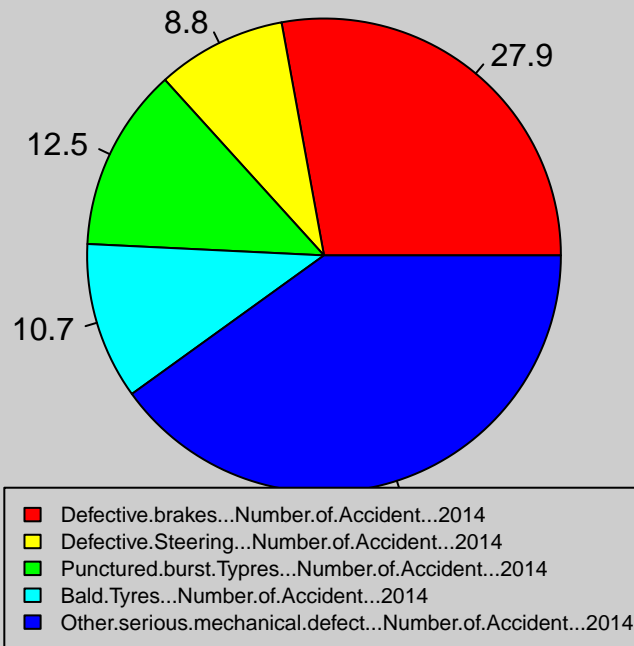
Chhattisgarh



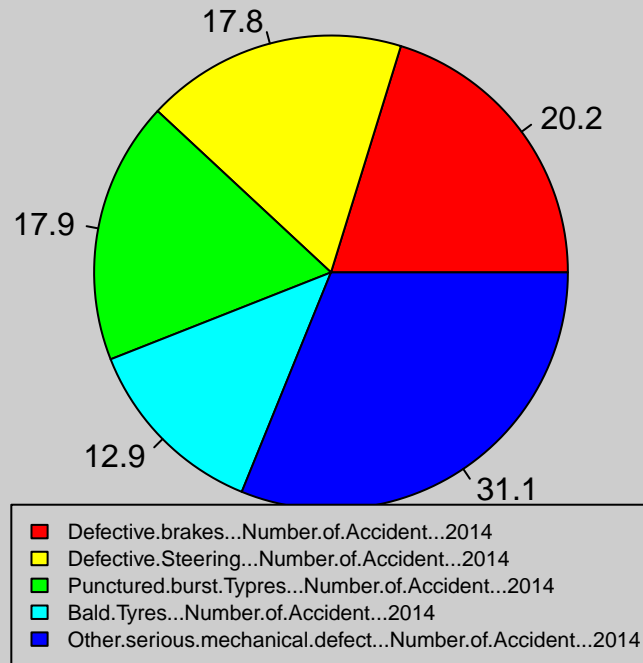
Goa



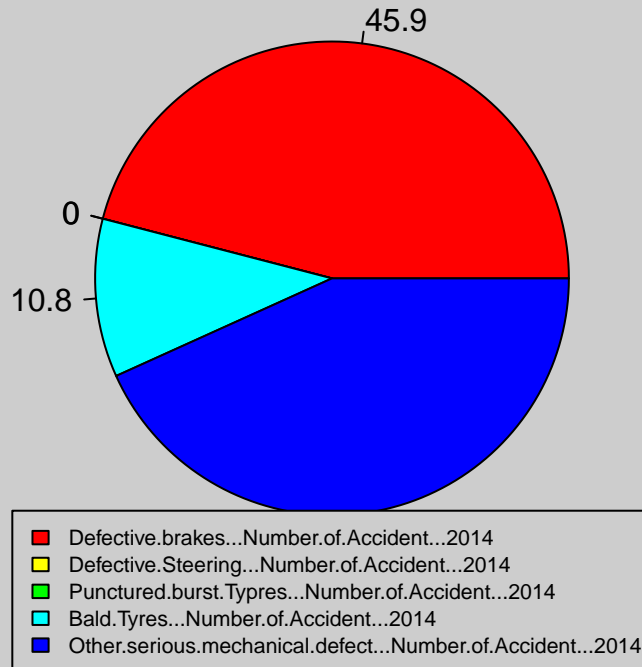
Gujarat



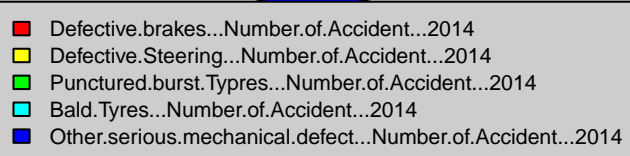
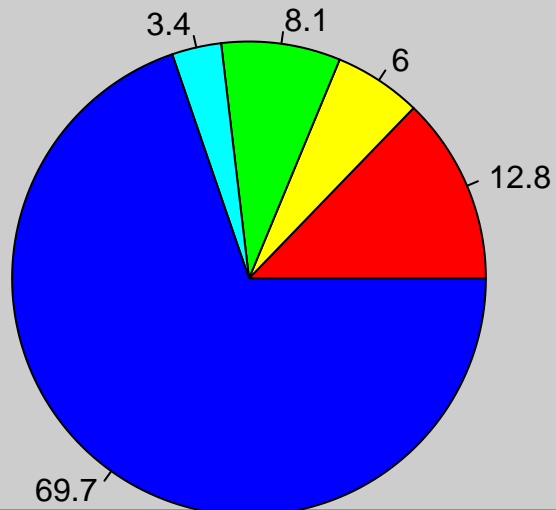
Haryana



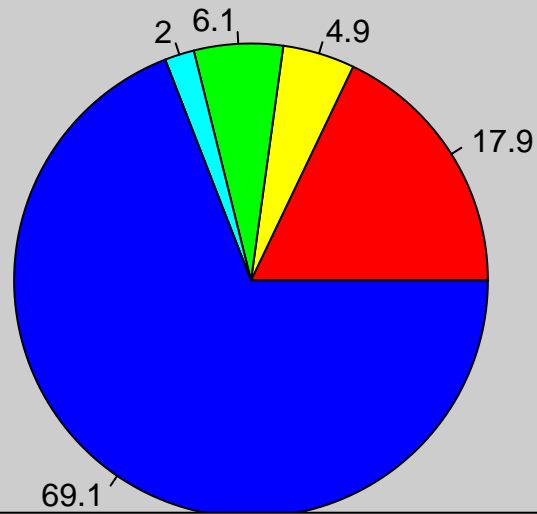
Himachal Pradesh



Jammu & Kashmir

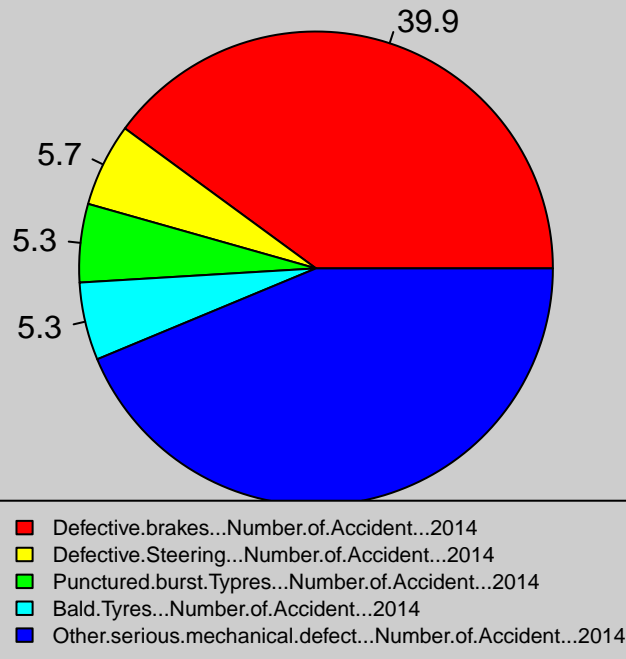


Jharkhand

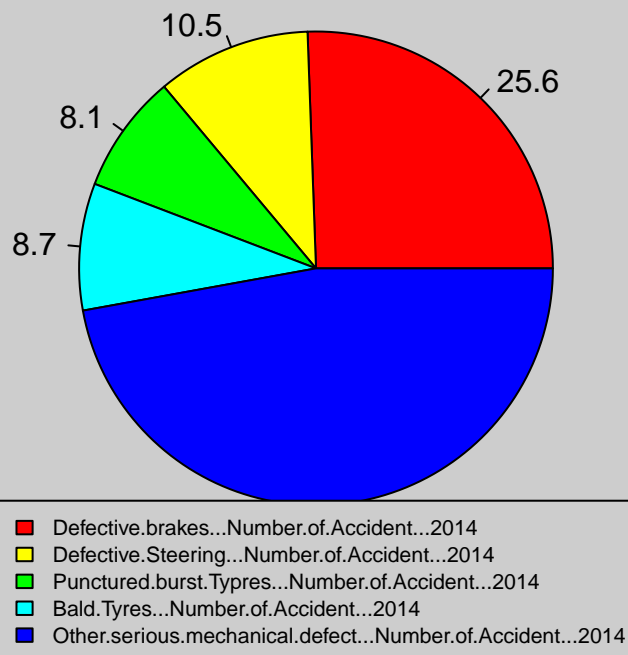


- Defective.brakes...Number of Accident...2014
- Defective.Steering...Number of Accident...2014
- Punctured.burst.Tyres...Number of Accident...2014
- Bald.Tyres...Number of Accident...2014
- Other.serious.mechanical.defect...Number of Accident...2014

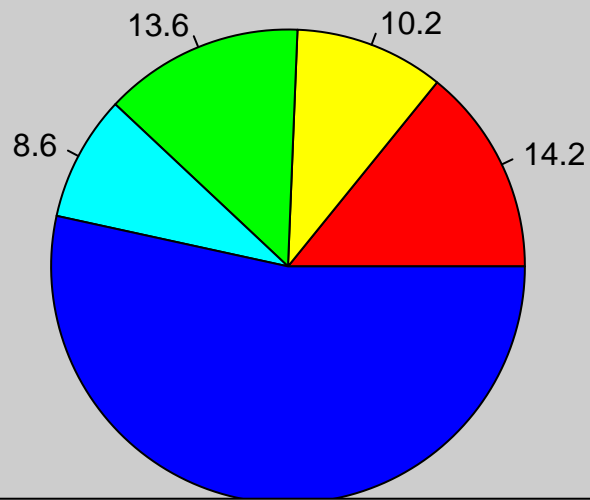
Karnataka



Madhya Pradesh

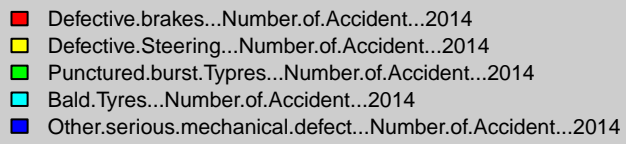
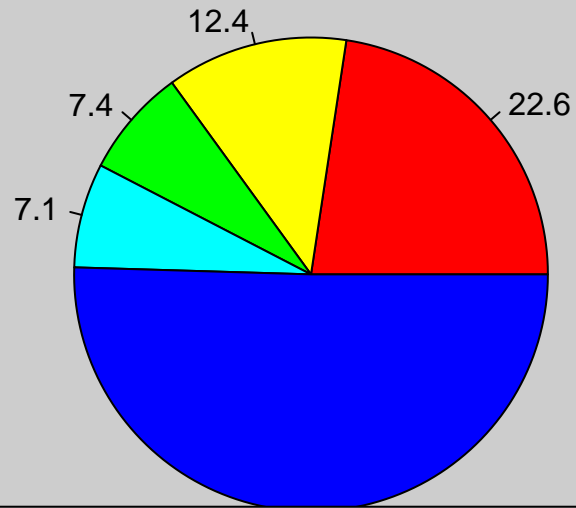


Maharashtra

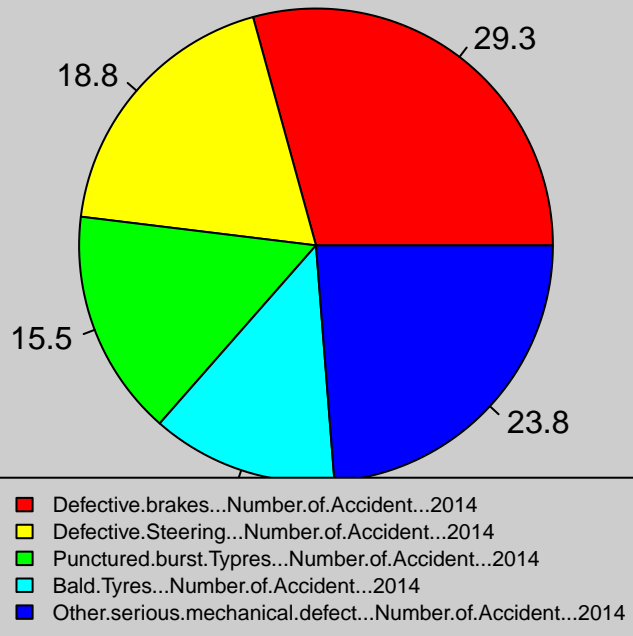


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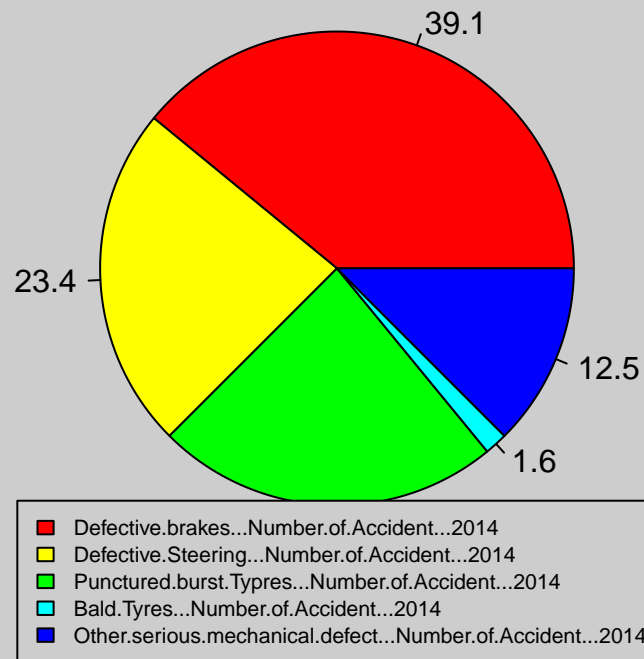
Manipur



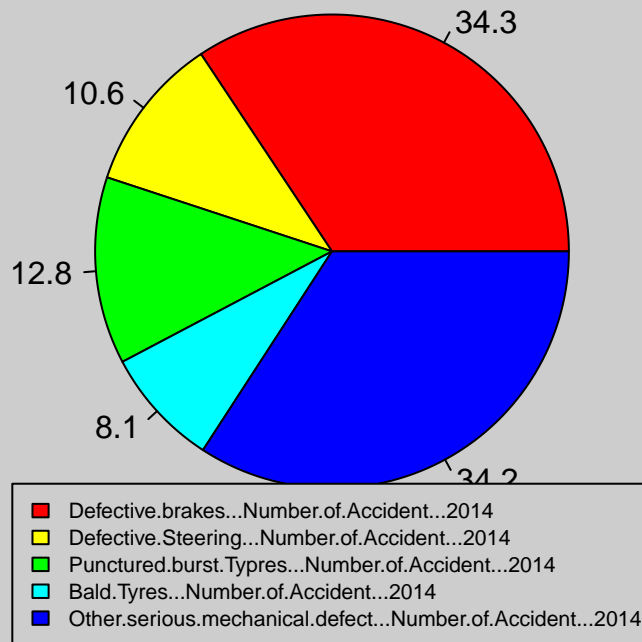
Meghalaya



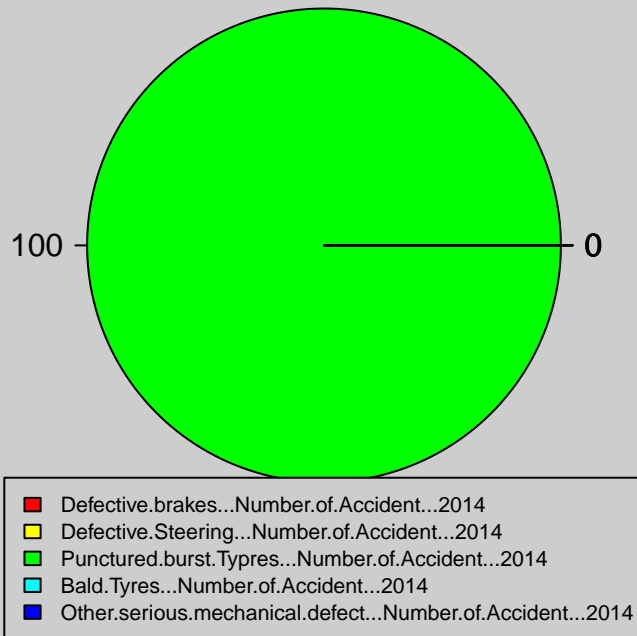
Nagaland



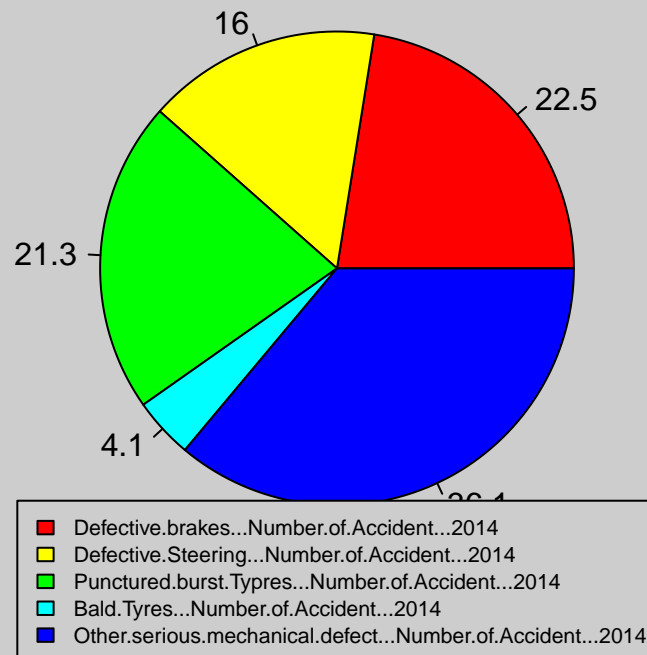
Orissa



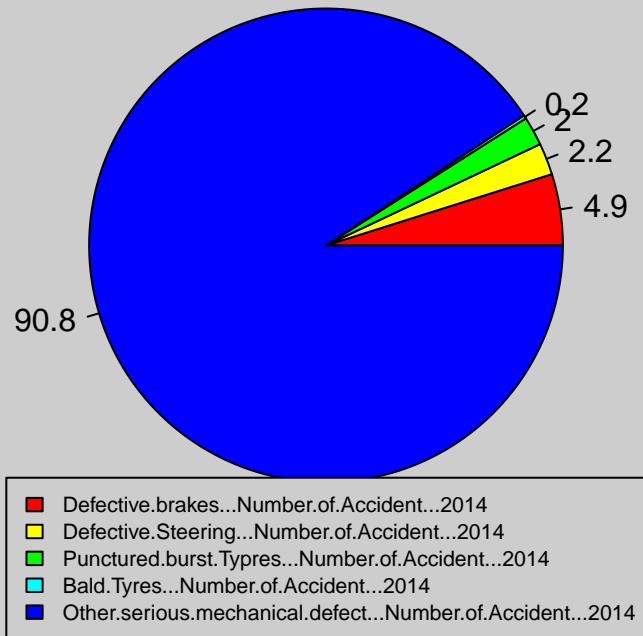
Puducherry



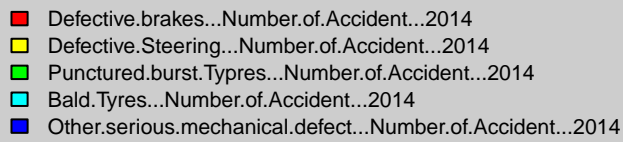
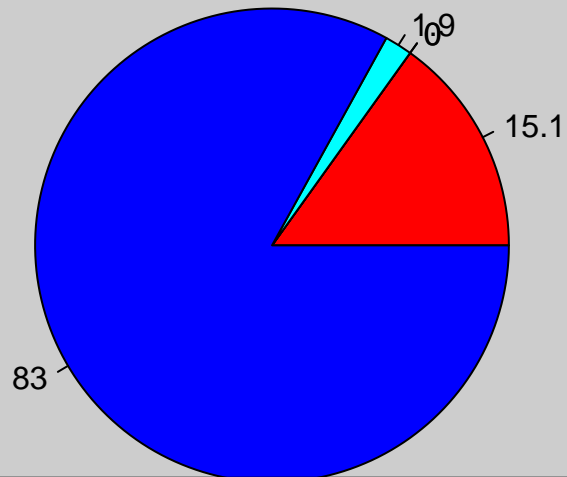
Punjab



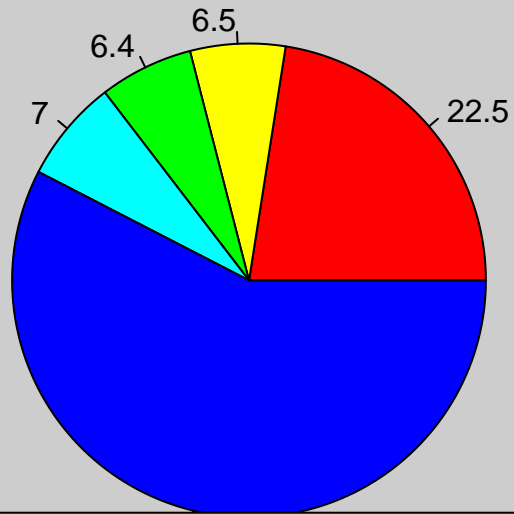
Rajasthan



Sikkim

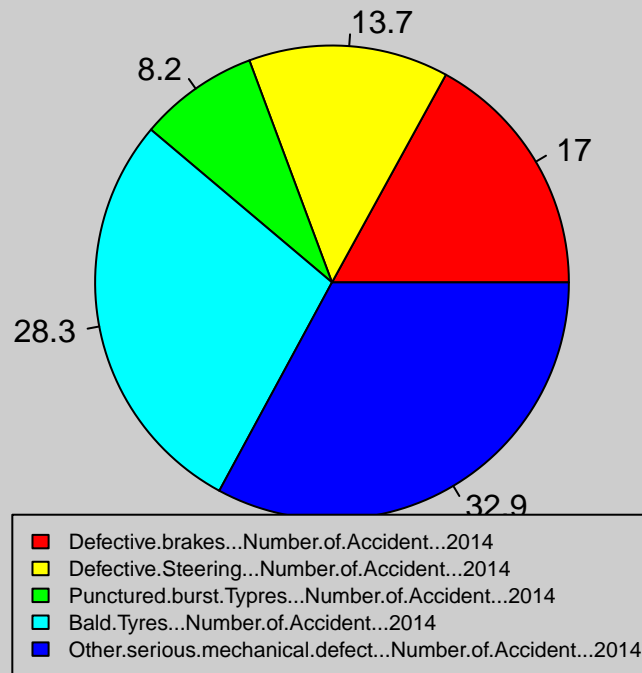


Tamil Nadu

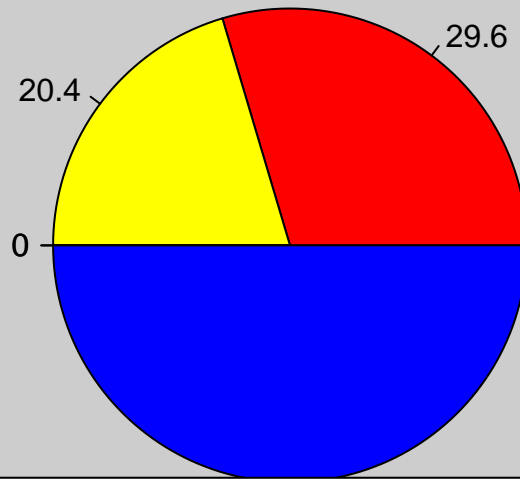


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Telangana

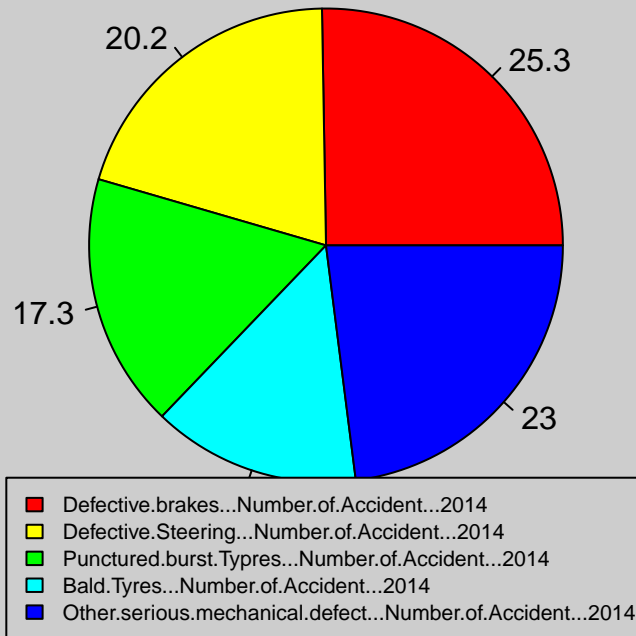


Tripura

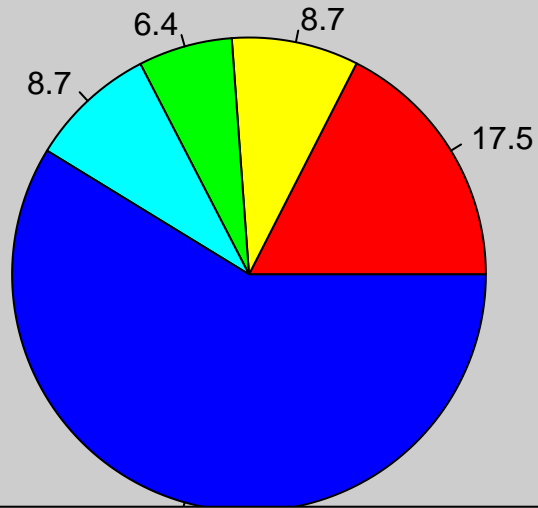


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- Other.serious.mechanical.defect...Number.of.Accident...2014

Uttar Pradesh



Uttarakhand



- Defective.brakes...Number.of.Accident...2014
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West Bengal

