R notebook

Code

19MID0020

Prashanth S

Hide

```
library(readxl)
library(ggplot2)
```

1. Create a histogram of percadultpoverty - Use a few different bin widths and show the results

Hide

```
west<-read_excel("west.xlsx")
```

```
New names:
* `` -> ...1
```

Hide

```
head(west)
```

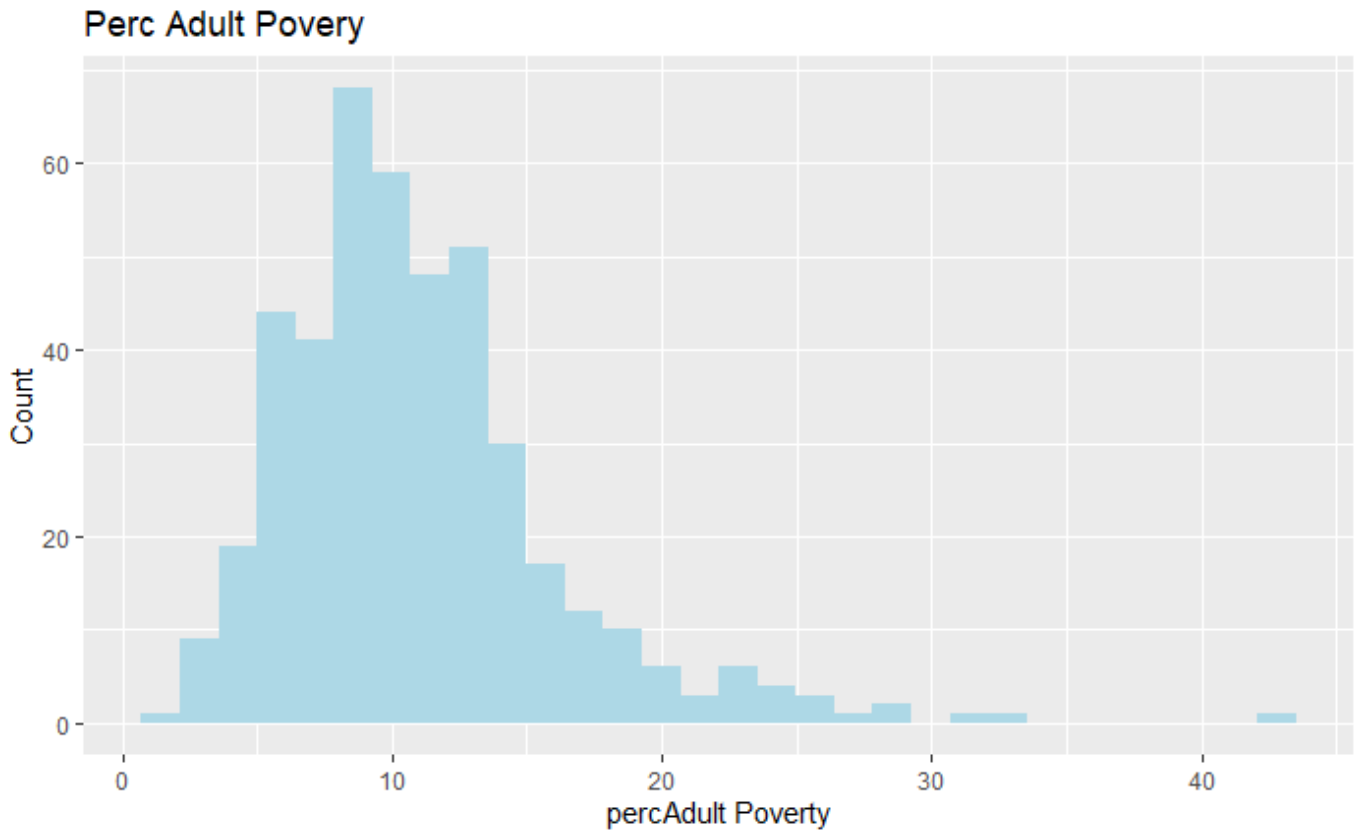
...1 <dbl>	…	county <chr>	state <chr>	area <dbl>	poptotal <dbl>	popdensity <dbl>	popwhite <dbl>	popblack <dbl>	popamerindian <dbl>
1	561	ADAMS	IL	0.052	66090	1270.9615	63917	1702	98
2	562	ALEXANDER	IL	0.014	10626	759.0000	7054	3496	19
3	563	BOND	IL	0.022	14991	681.4091	14477	429	35
4	564	BOONE	IL	0.017	30806	1812.1176	29344	127	46
5	565	BROWN	IL	0.018	5836	324.2222	5264	547	14
6	566	BUREAU	IL	0.050	35688	713.7600	35157	50	65

6 rows | 1-10 of 29 columns

Hide

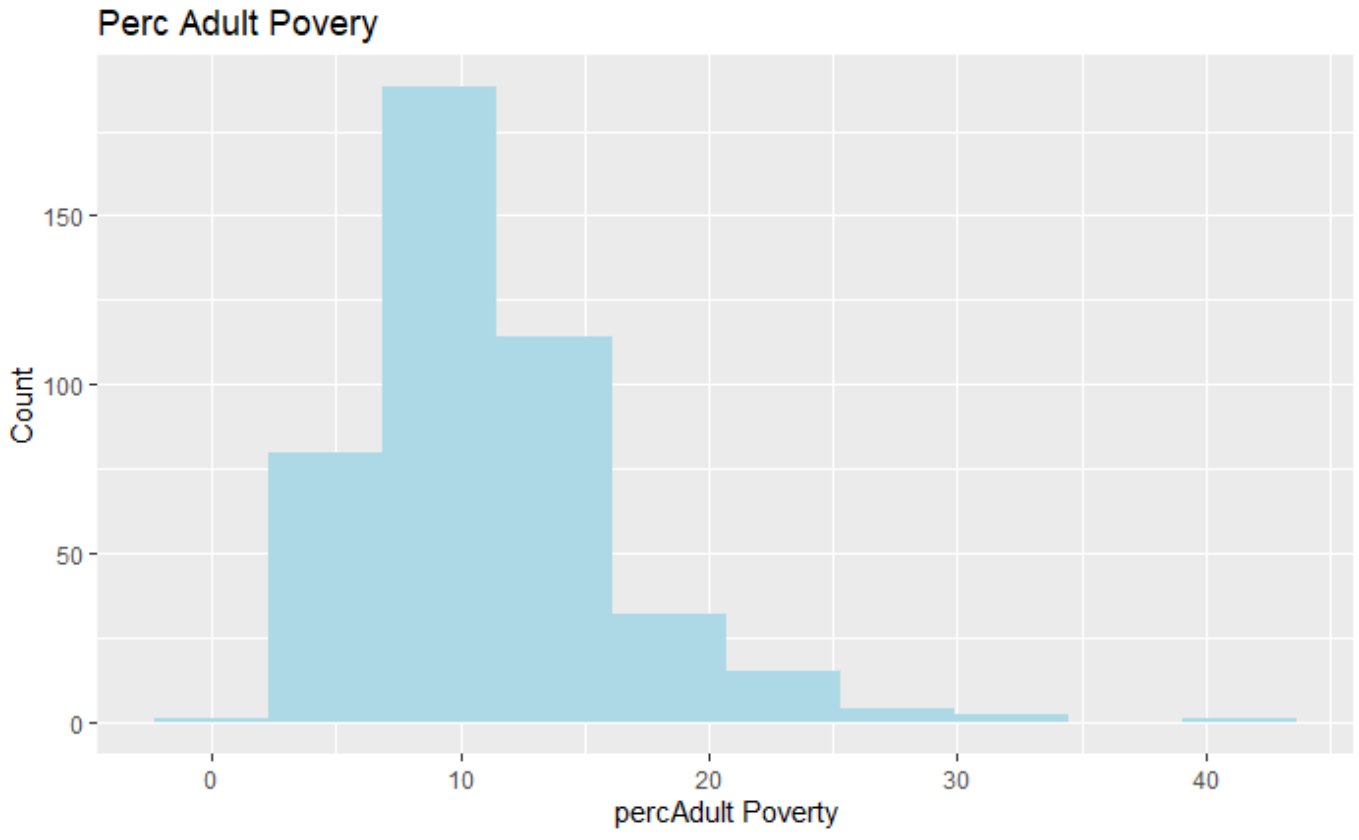
```
ggplot(data=west,aes(percadultpoverty))+
  geom_histogram(fill="lightblue")+
  labs(x="percAdult Poverty", y="Count")+
  ggtitle("Perc Adult Povery ")
```

```
`stat_bin()` using `bins = 30`. Pick better value with `binwidth`.
```



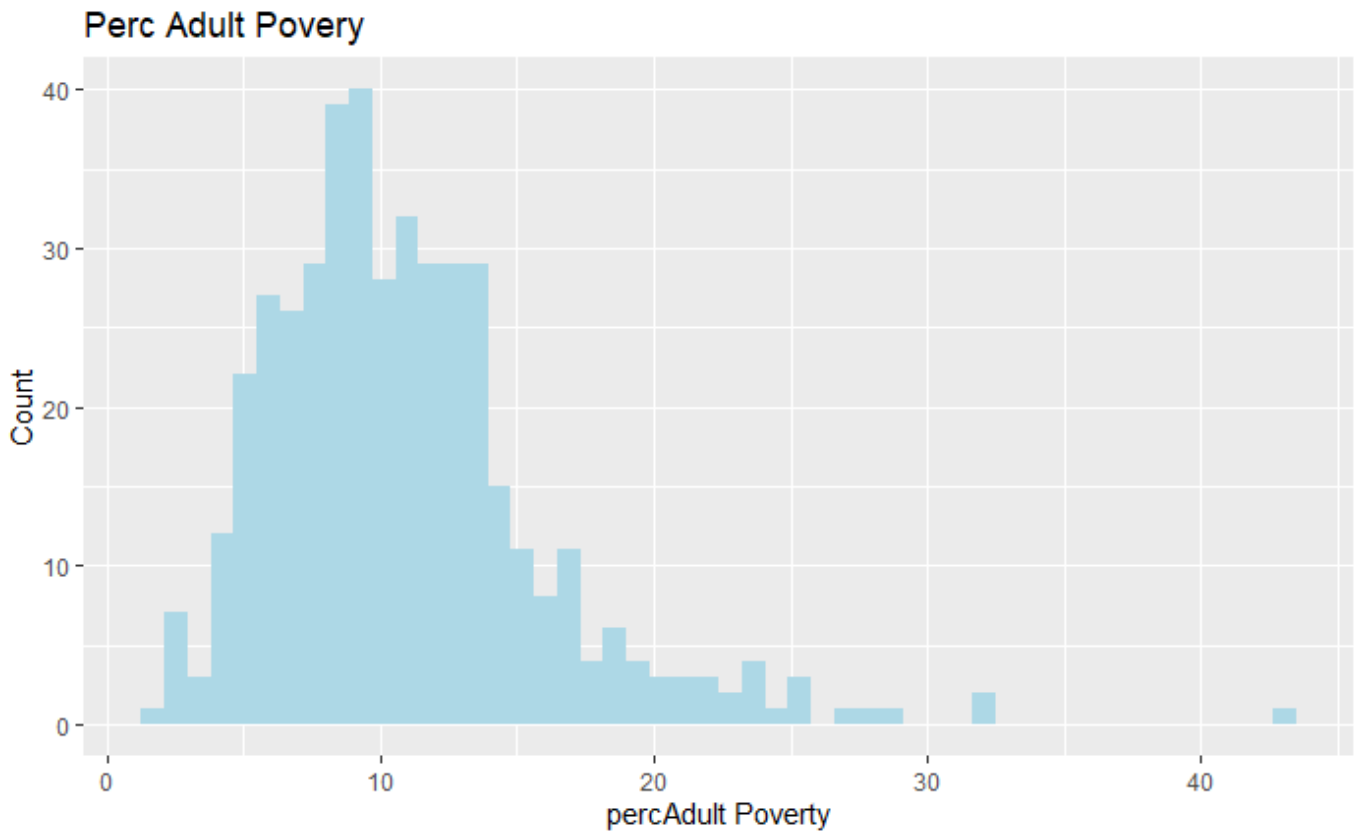
Hide

```
ggplot(data=west,aes(percadultpoverty))+
  geom_histogram(fill="lightblue",bins=10)+
  labs(x="percAdult Poverty", y="Count")+
  ggtitle("Perc Adult Povery ")
```



Hide

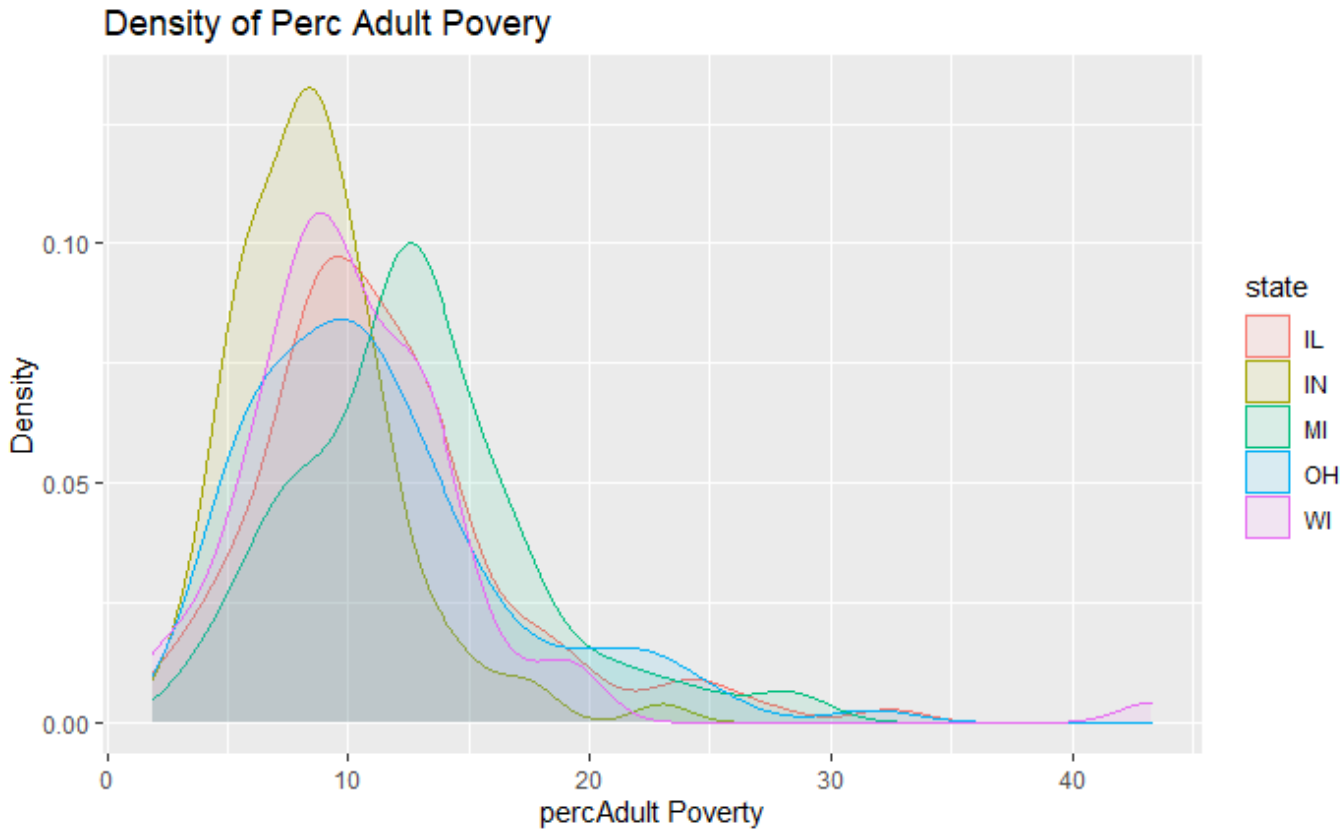
```
ggplot(data=west,aes(percadultpoverty))+
  geom_histogram(fill="lightblue",bins=50)+
  labs(x="percAdult Poverty", y="Count")+
  ggtitle("Perc Adult Povery ")
```



2.Show percadultpoverty using kernel density plot

Hide

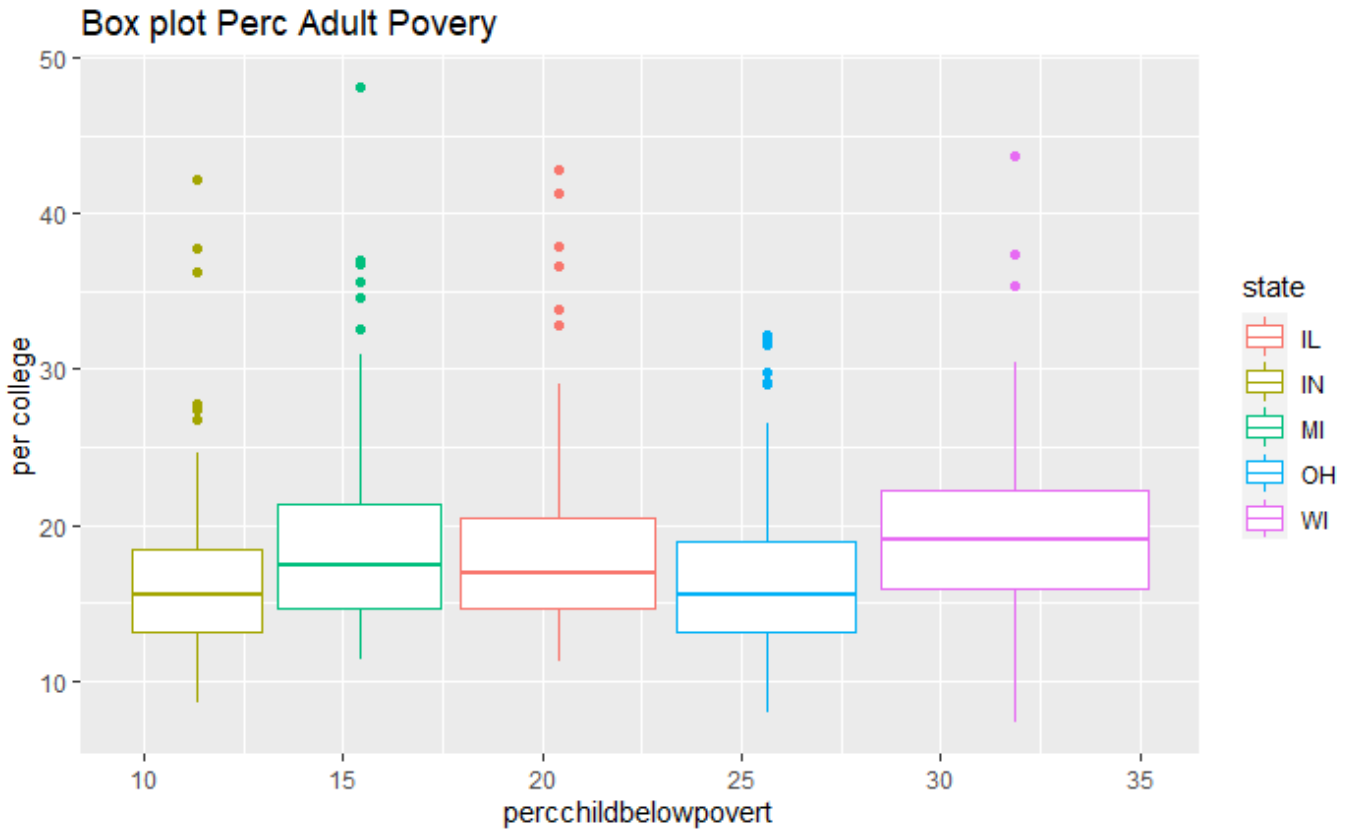
```
ggplot(data=west,aes(percadultpoverty,colour = state,fill=state))+geom_density(alpha = 0.1)+
  labs(x="percAdult Poverty", y="Density")+
  ggtitle("Density of Perc Adult Povery ")
```



3. Create a box plot of percchildbelowpovert – percentage of population with college degree. Differentiate the states using colors

Hide

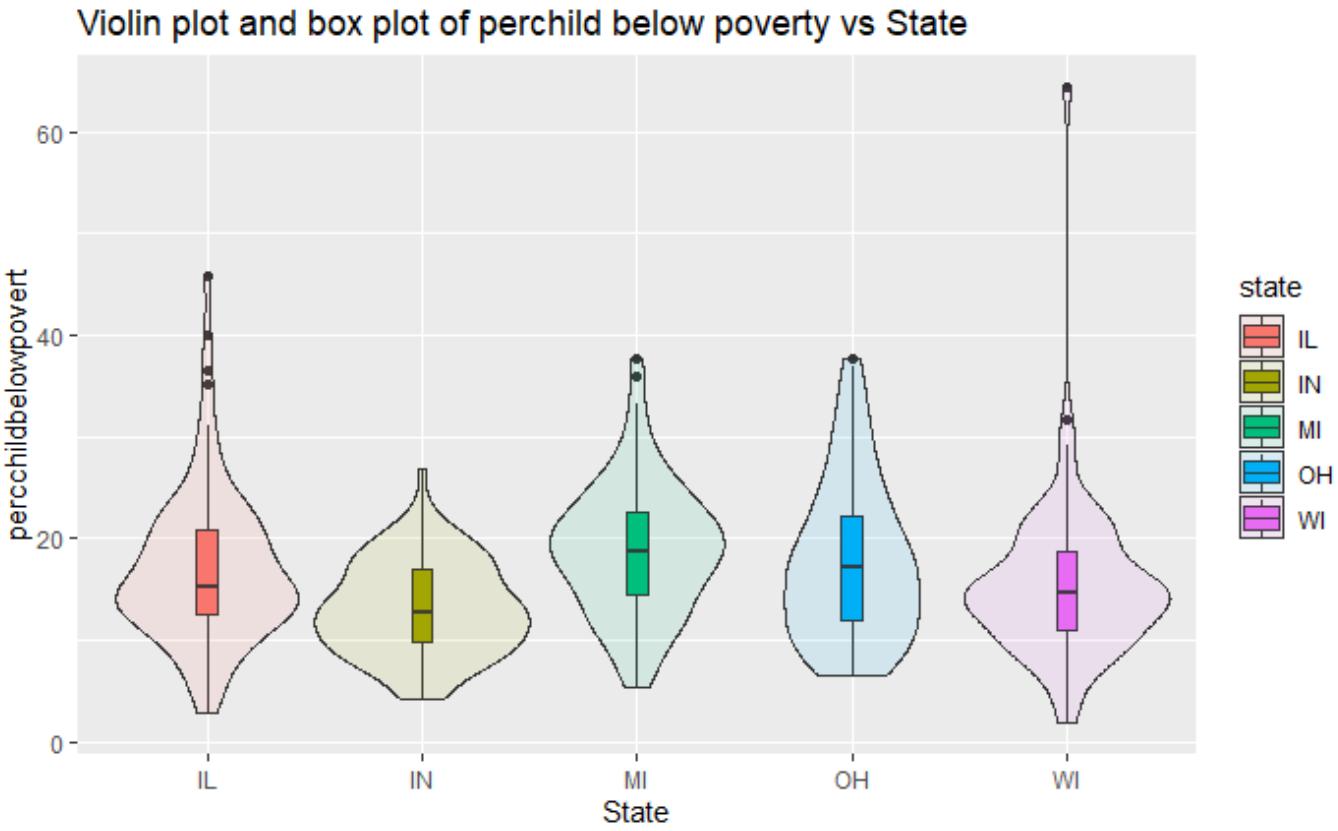
```
ggplot(west, aes(x=percadultpoverty, y=percollege, color=state)) +
  geom_boxplot()+
  labs(x="percchildbelowpovert", y="per college")+
  ggtitle("Box plot Perc Adult Povery ")
```



4.Create a plot that combines both violin plot and box plot for percchildbelowpovert

Hide

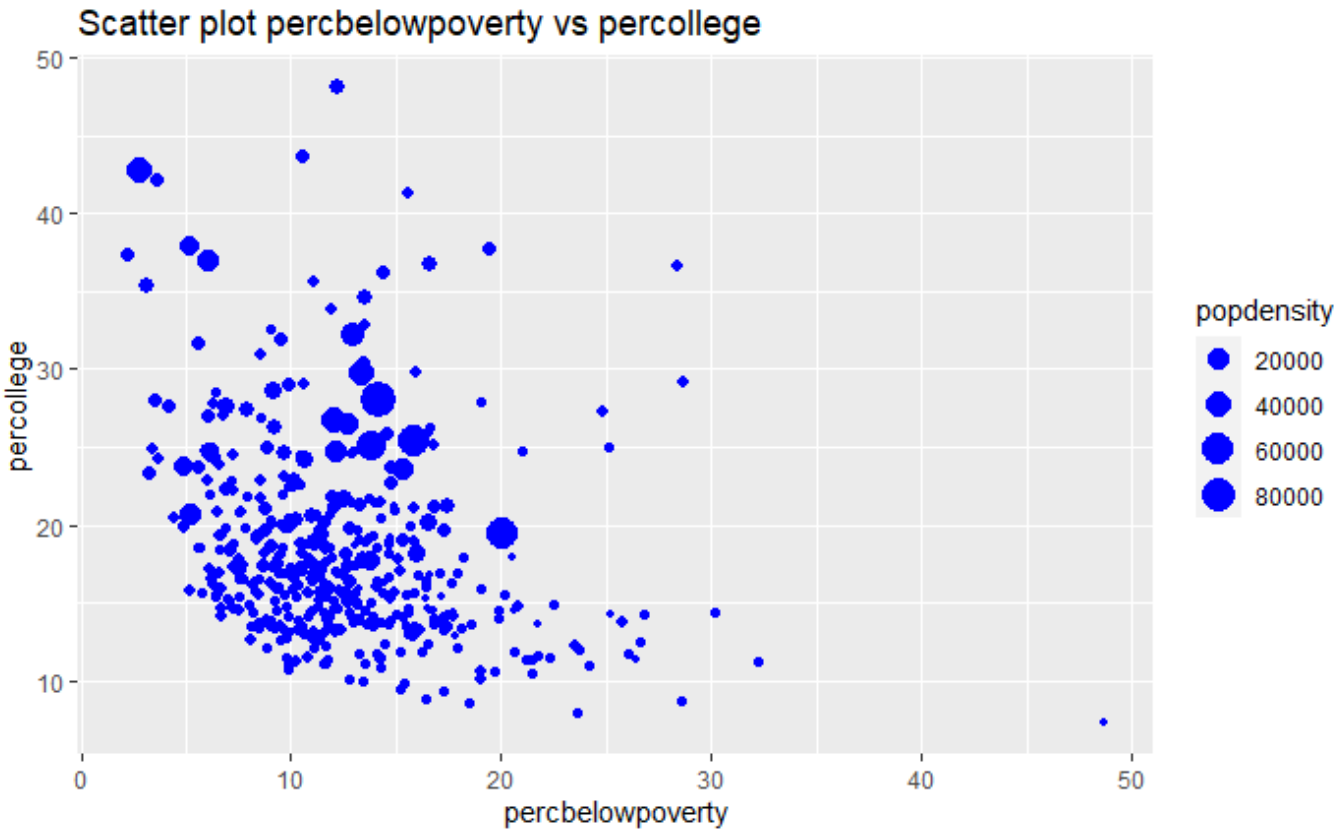
```
ggplot(west, aes(x=state,y=percchildbelowpovert,fill=state)) +
  geom_boxplot(width=0.1)+
  geom_violin(width=1,alpha=0.1)+
  labs(x="State", y="percchildbelowpovert")+
  ggtitle("Violin plot and box plot of perchild below poverty vs State ")
```



Create a scatter plot between precollege and percbelowpoverty. Use size channel to show the popdensity

Hide

```
ggplot(west, aes(x=percbelowpoverty,y=percollege,size=popdensity))+
  geom_point(color="blue")+
  ggtitle("Scatter plot percbelowpoverty vs percollege ")
```


Scatter plot percbelowpoverty vs percollege
percollege
percbelowpoverty
popdensity
20000
40000
60000
80000
50
40
30
20
10
0
10
20
30
40
50