Assignment 03

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Load the ggplot2 package

```
library(ggplot2)
theme_set(theme_minimal())
```

Set the working directory to the root of your DSC 520 directory

Note: This was done during the 'setup' chunk since this is an Rmarkdown file.

```
getwd()
```

```
## [1] "C:/Users/karli/OneDrive/Documents/Data Science/DSC520_Stats_for_DS/DSC520/dsc520"
```

Load the `data/r4ds/heights.csv` to

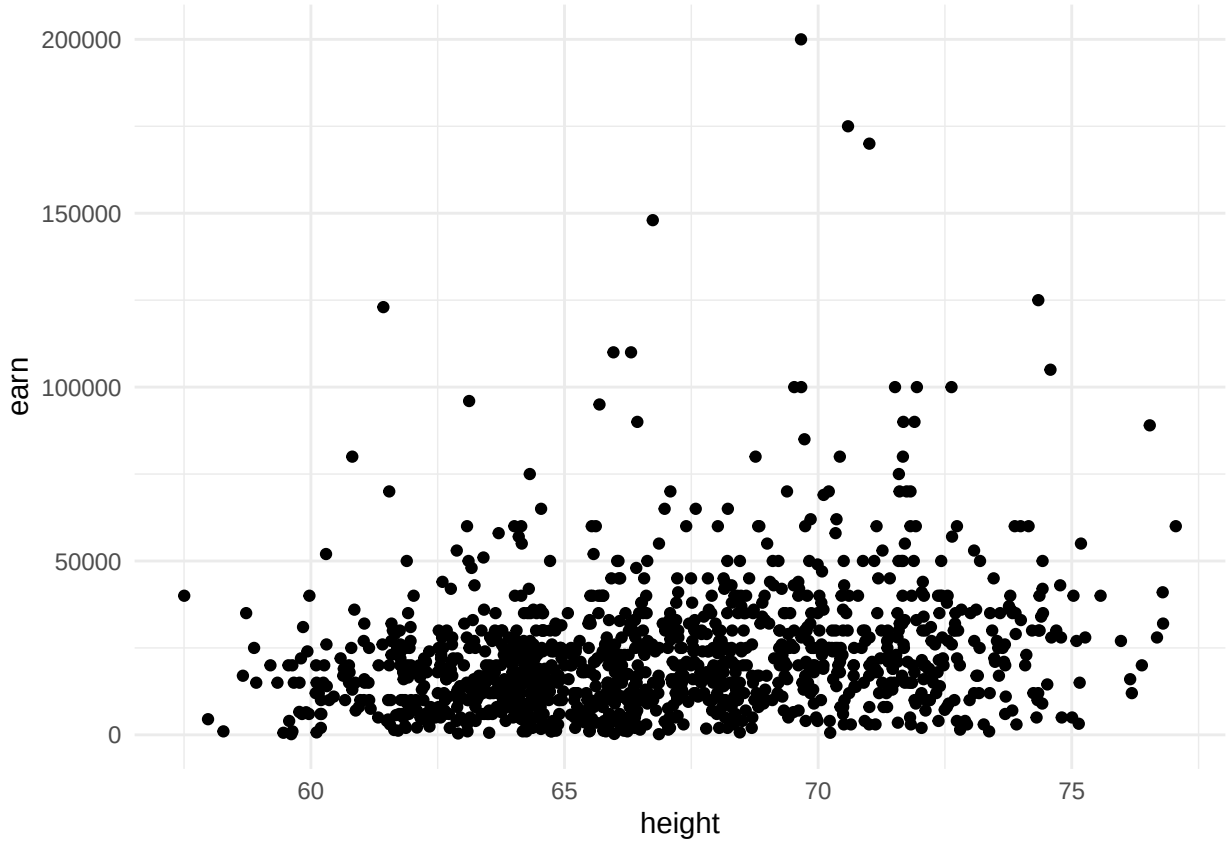
```
heights_df <- read.csv("data/r4ds/heights.csv")
```

https://ggplot2.tidyverse.org/reference/geom_point.html

Using `geom_point()` create three scatterplots for

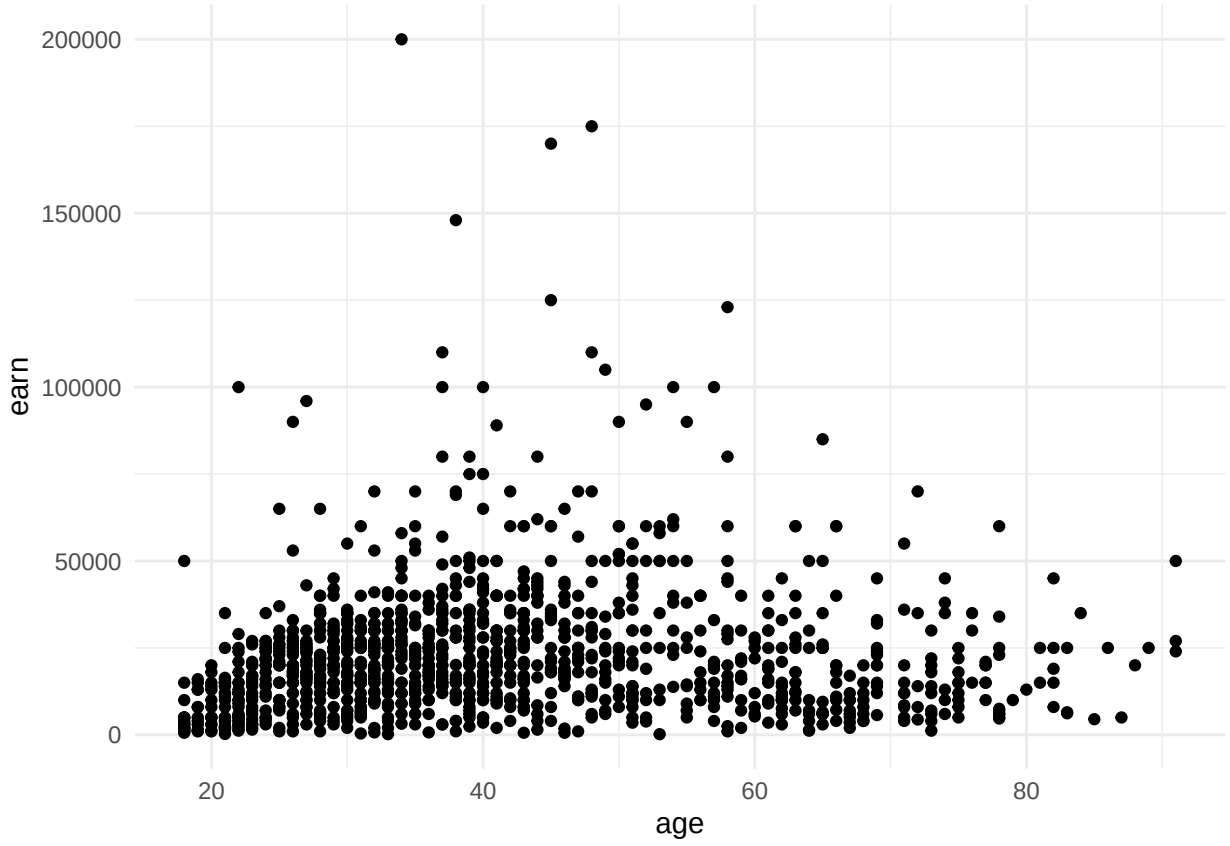
`height` vs. `earn`

```
ggplot(heights_df, aes(x=height, y=earn)) + geom_point()
```



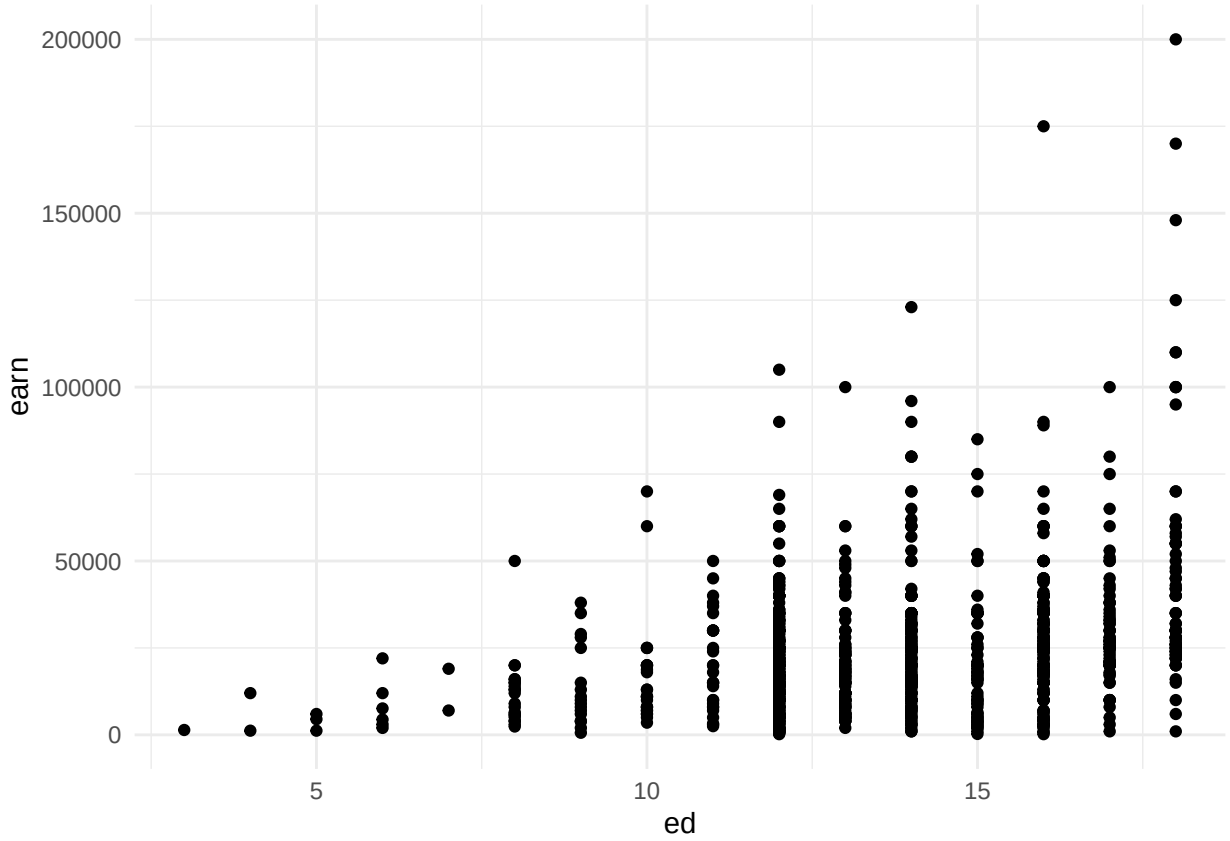
age vs. earn

```
ggplot(heights_df, aes(x=age, y=earn)) + geom_point()
```



ed vs. earn

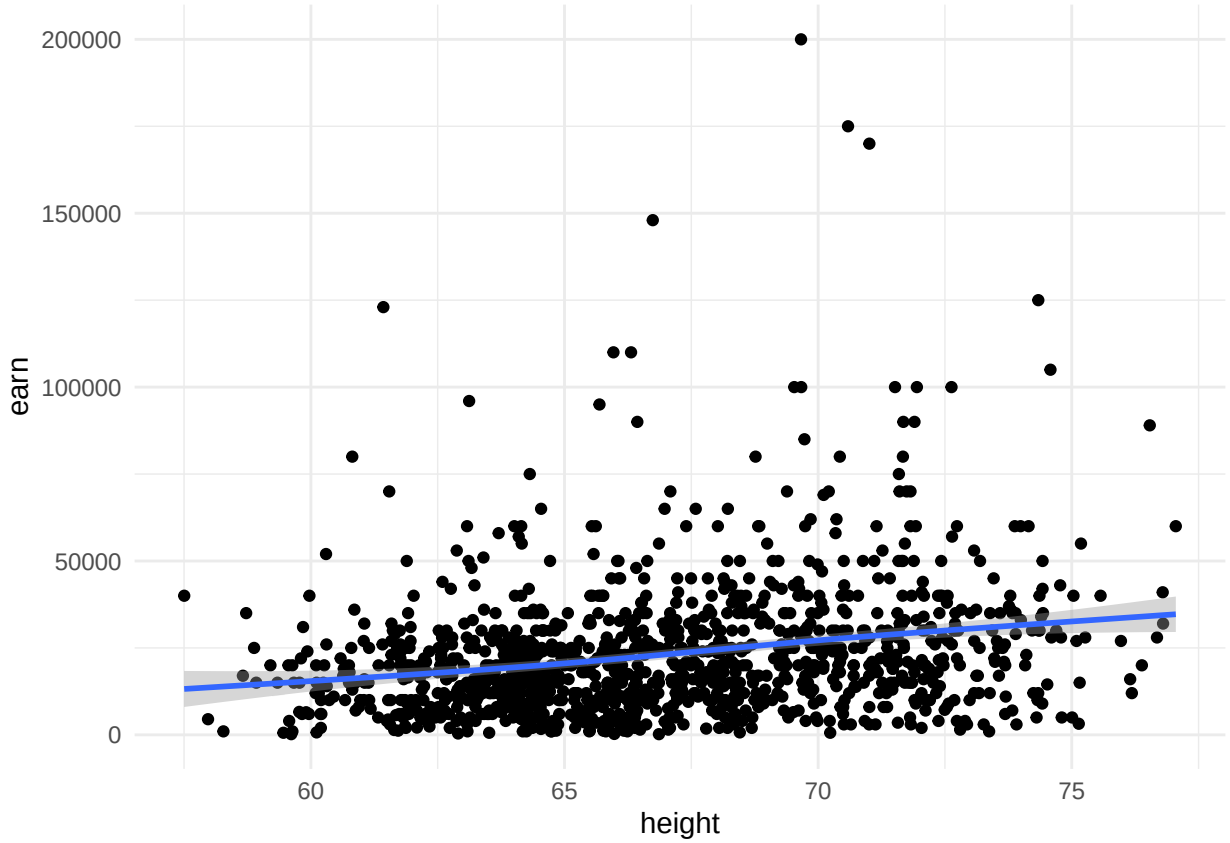
```
ggplot(heights_df, aes(x=ed, y=earn)) + geom_point()
```



Re-create the three scatterplots and add a regression trend line using ## the `geom_smooth()` function ## `height` vs. `earn`

```
ggplot(heights_df, aes(x=height, y=earn)) + geom_point() + geom_smooth()
```

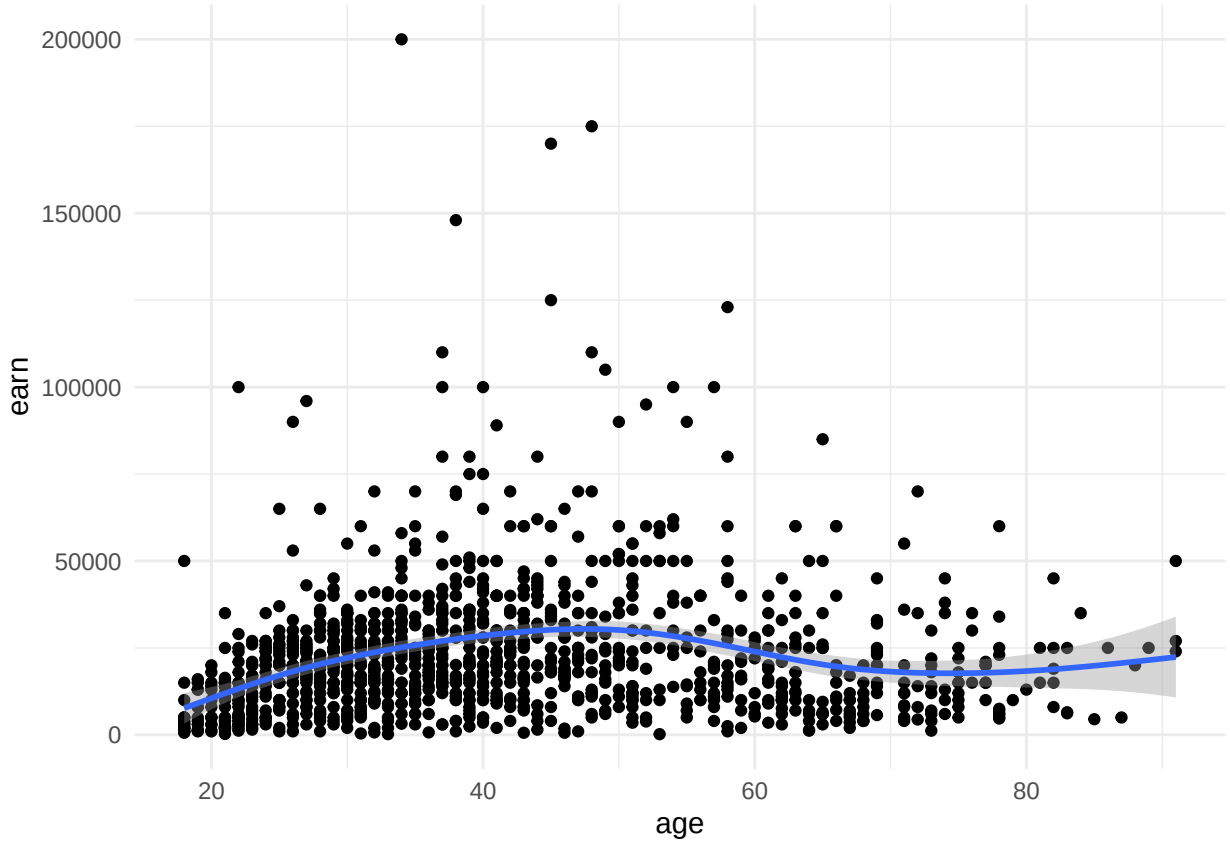
```
## `geom_smooth()` using method = 'gam' and formula 'y ~ s(x, bs = "cs")'
```



age vs. earn

```
ggplot(heights_df, aes(x=age, y=earn)) + geom_point() + geom_smooth()
```

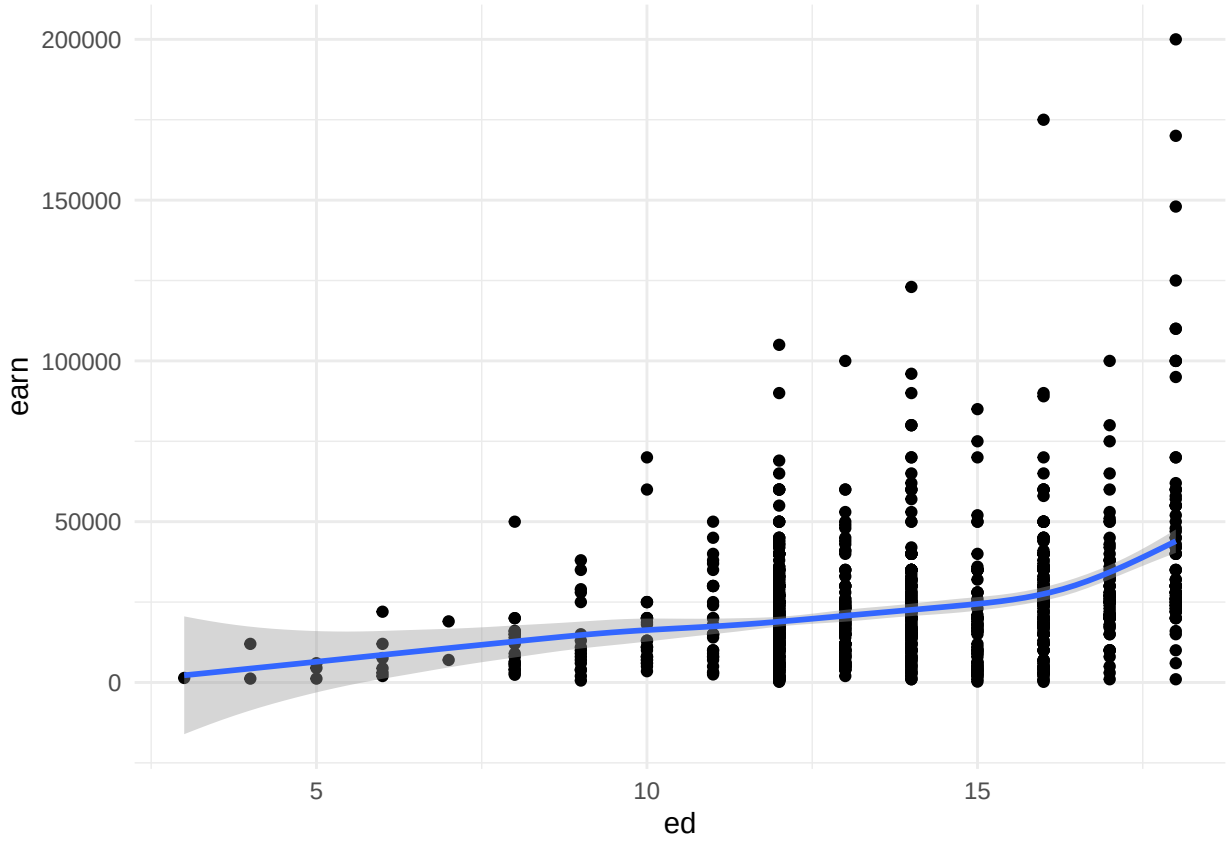
```
## `geom_smooth()` using method = 'gam' and formula 'y ~ s(x, bs = "cs")'
```



ed vs. earn

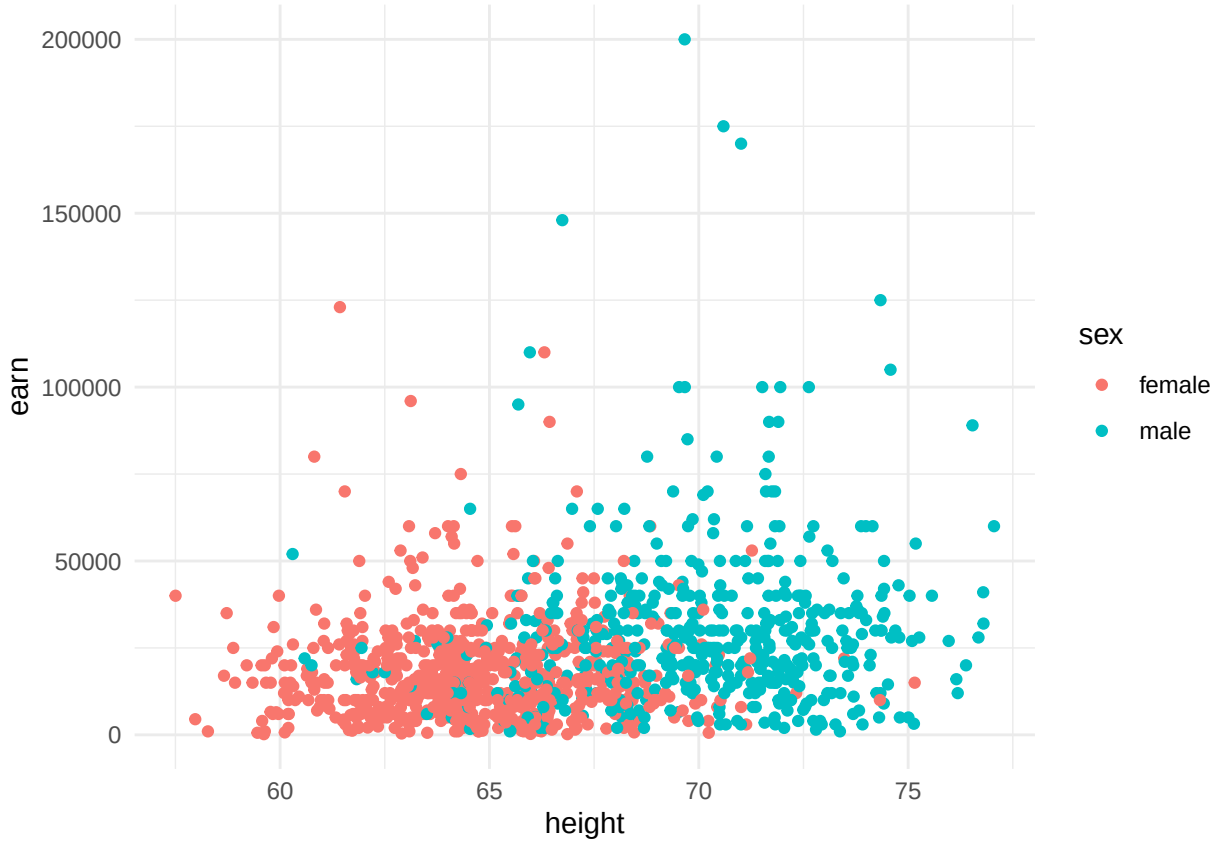
```
ggplot(heights_df, aes(x=ed, y=earn)) + geom_point() + geom_smooth()
```

```
## `geom_smooth()` using method = 'gam' and formula 'y ~ s(x, bs = "cs")'
```



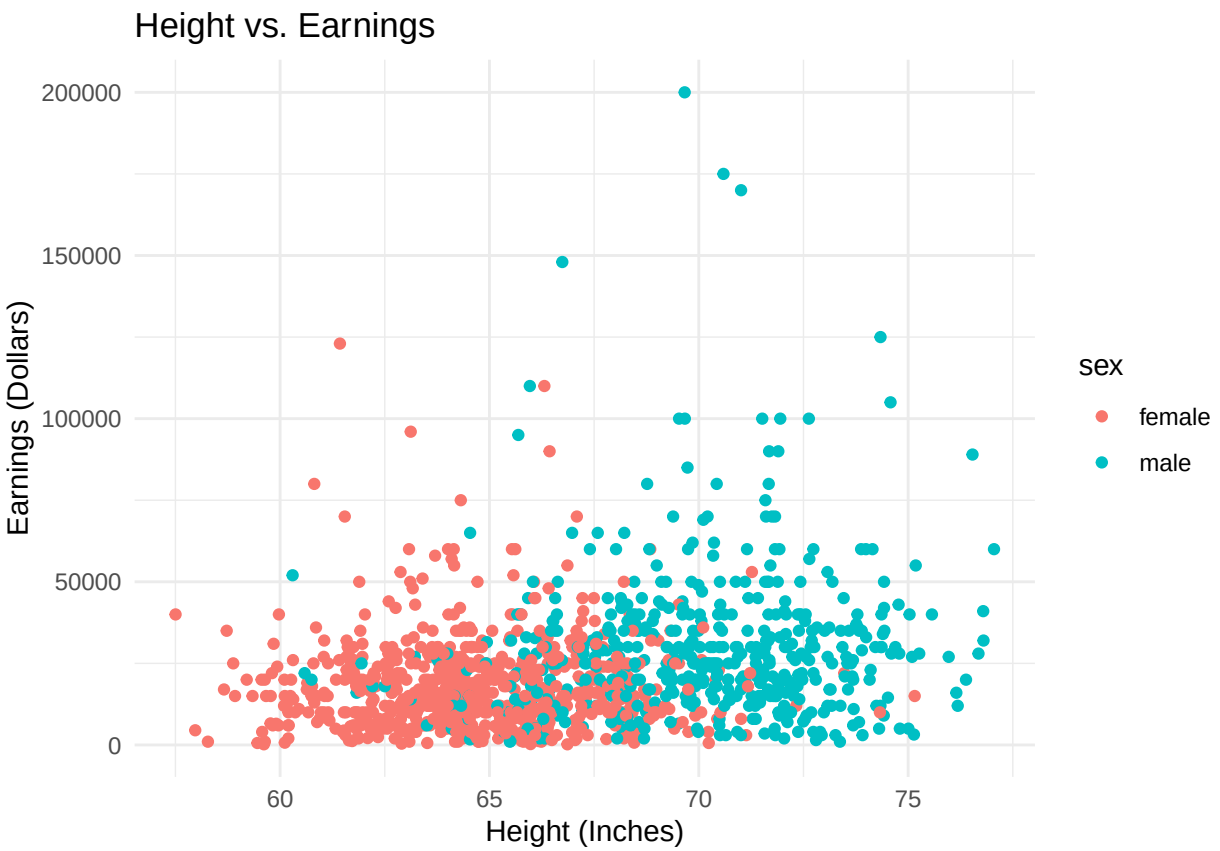
Create a scatterplot of `height`` vs.earn. Usesexas thecol‘ (color) attribute

```
ggplot(heights_df, aes(x=height, y=earn, col=sex)) + geom_point()
```



Using `ggtitle()`, `xlab()`, and `ylab()` to add a title, x label, and y label to the previous plot ## Title: Height vs. Earnings ## X label: Height (Inches) ## Y Label: Earnings (Dollars)

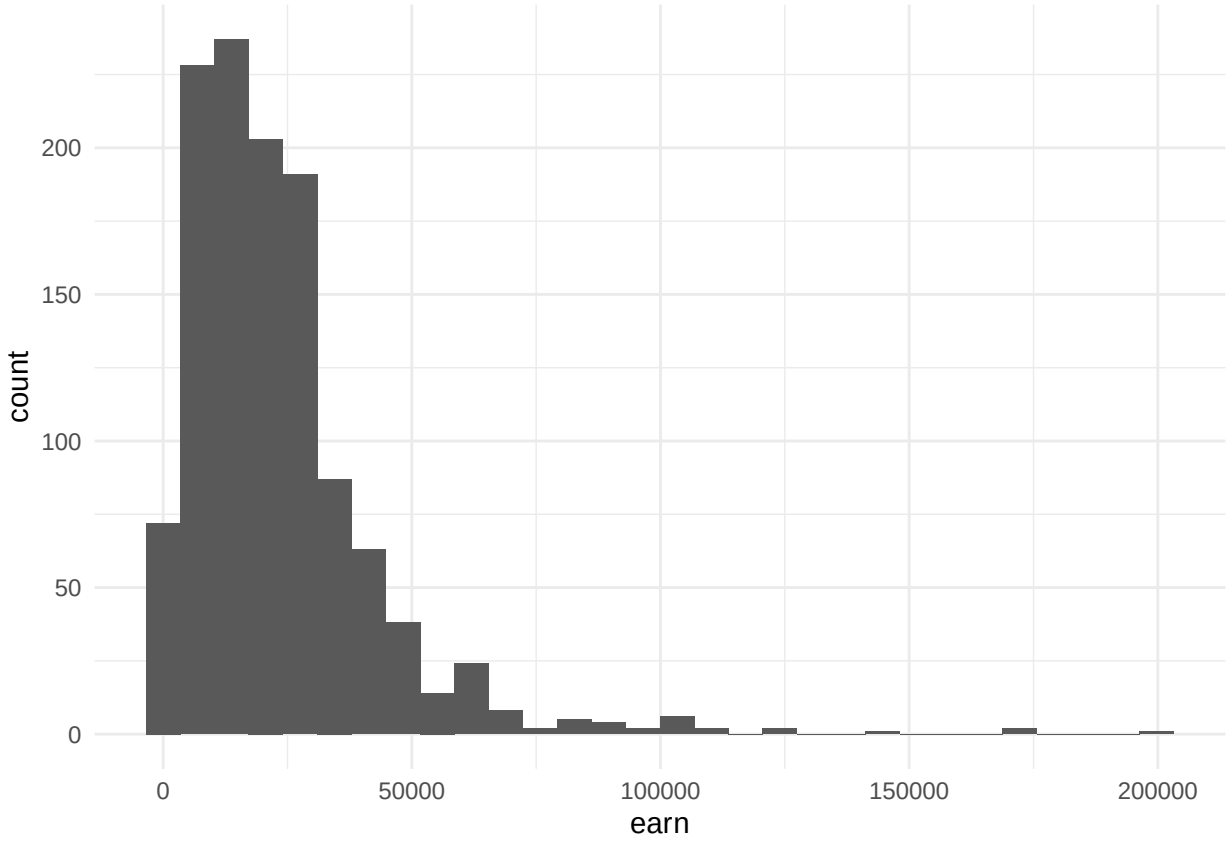
```
ggplot(heights_df, aes(x=height, y=earn, col=sex)) + ggtitle("Height vs. Earnings") + xlab("Height (Inc
```



https://ggplot2.tidyverse.org/reference/geom_histogram.html ## Create a histogram of the `earn` variable using `geom_histogram()`

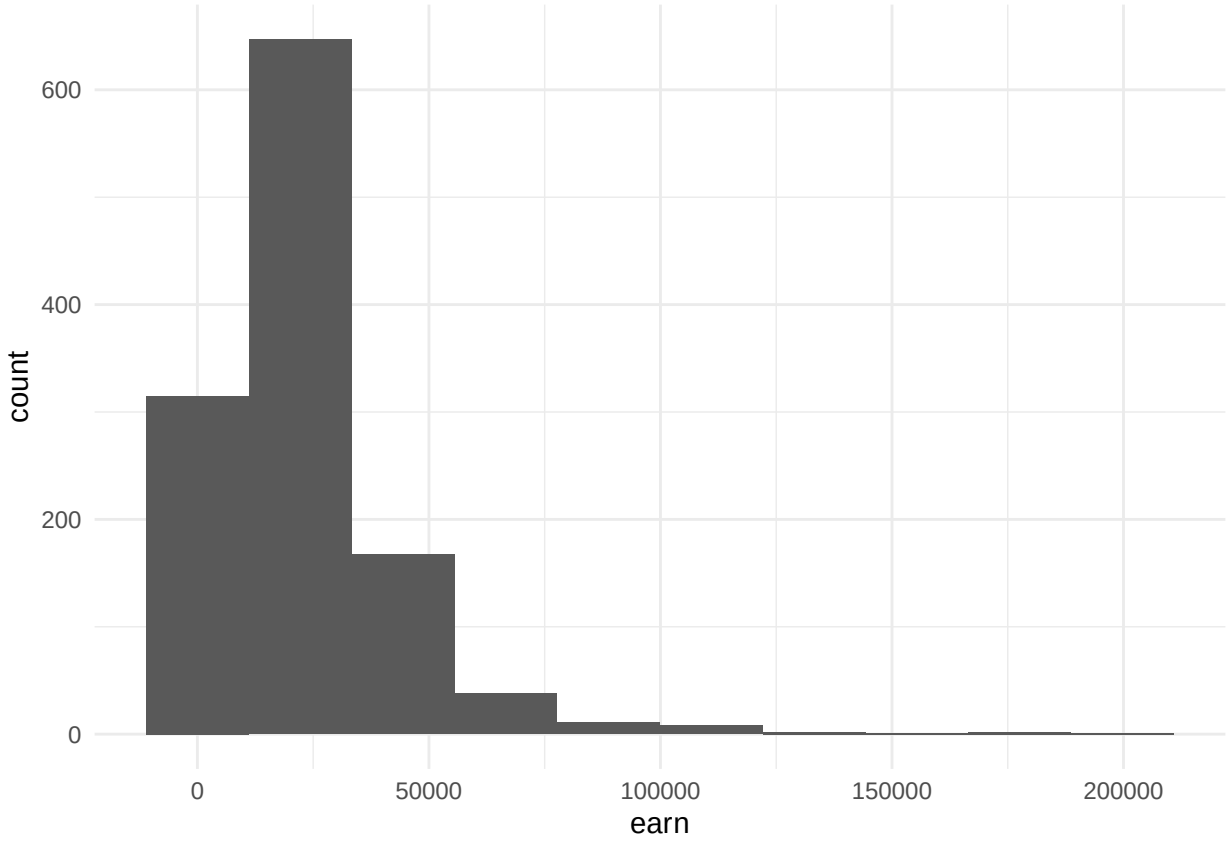
```
ggplot(heights_df, aes(earn)) + geom_histogram()
```

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



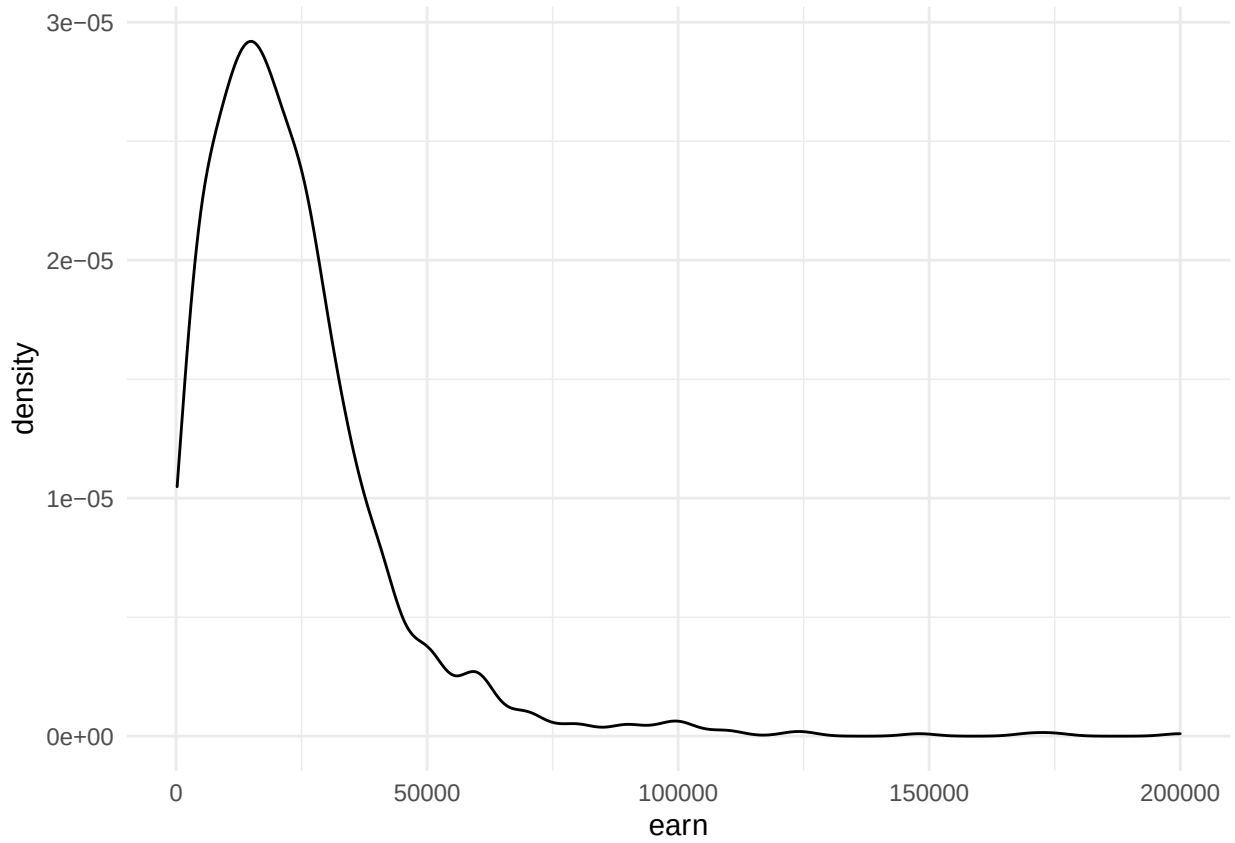
Create a histogram of the `earn` variable using `geom_histogram()` ## Use 10 bins

```
ggplot(heights_df, aes(earn)) + geom_histogram(bins = 10)
```



https://ggplot2.tidyverse.org/reference/geom_density.html ## Create a kernel density plot of `earn` using `geom_density()`

```
ggplot(heights_df, aes(earn)) +  geom_density()
```


3e−05
2e−05
1e−05
0e+00
density
0
50000
100000
150000
200000
earn