

The results below are generated from an R script.

```
# Assignment: ASSIGNMENT 03
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# Date: 2023-06-25

## Load the ggplot2 package
library(ggplot2)
theme_set(theme_minimal())

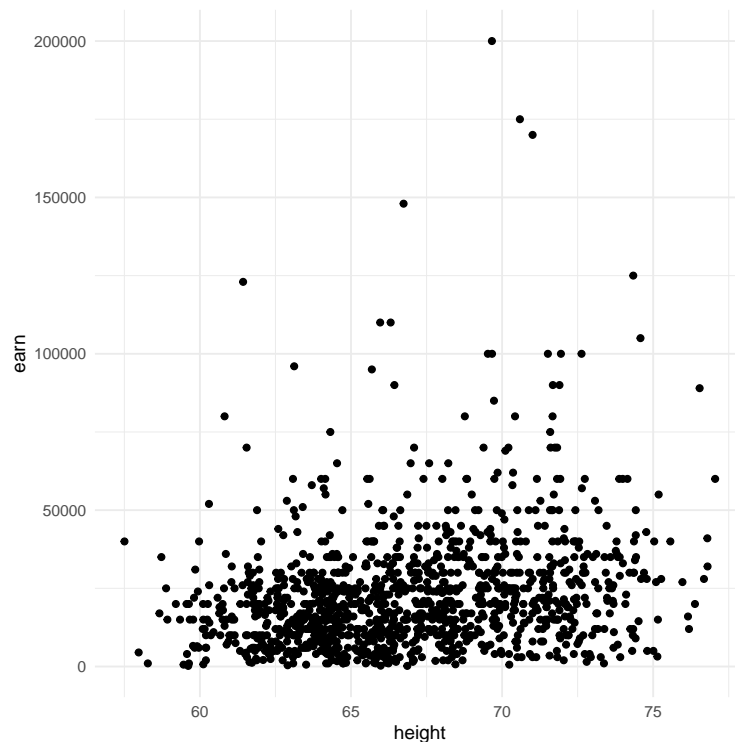
getwd()

## [1] "C:/Users/21428899/OneDrive-Bellevue University/Documents/GitHub/dsc520"

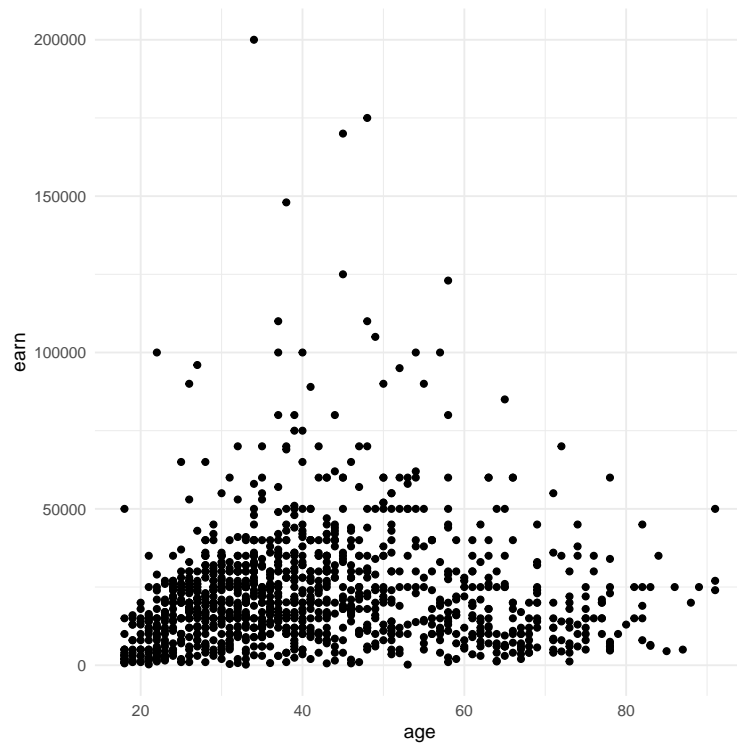
## Set the working directory to the root of your DSC 520 directory
setwd("C:/Users/21428899/OneDrive-Bellevue University/Documents/GitHub/dsc520")

## Load the 'data/r4ds/heights.csv' to
heights_df <- read.csv("data/r4ds/heights.csv")

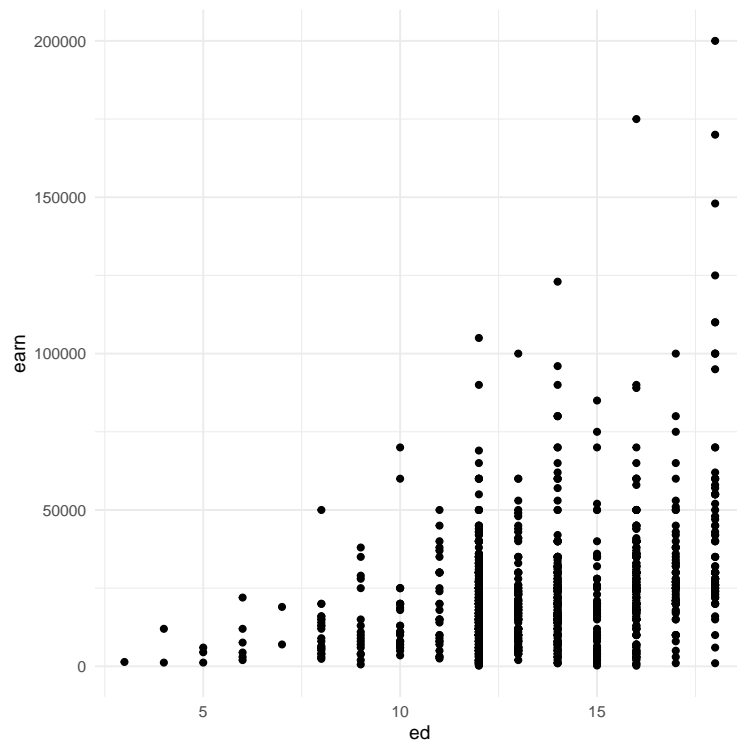
# https://ggplot2.tidyverse.org/reference/geom_point.html
## Using 'geom_point()' create three scatterplots for
## 'height' vs. 'earn'
ggplot(heights_df, aes(x = height, y = earn)) + geom_point()
```



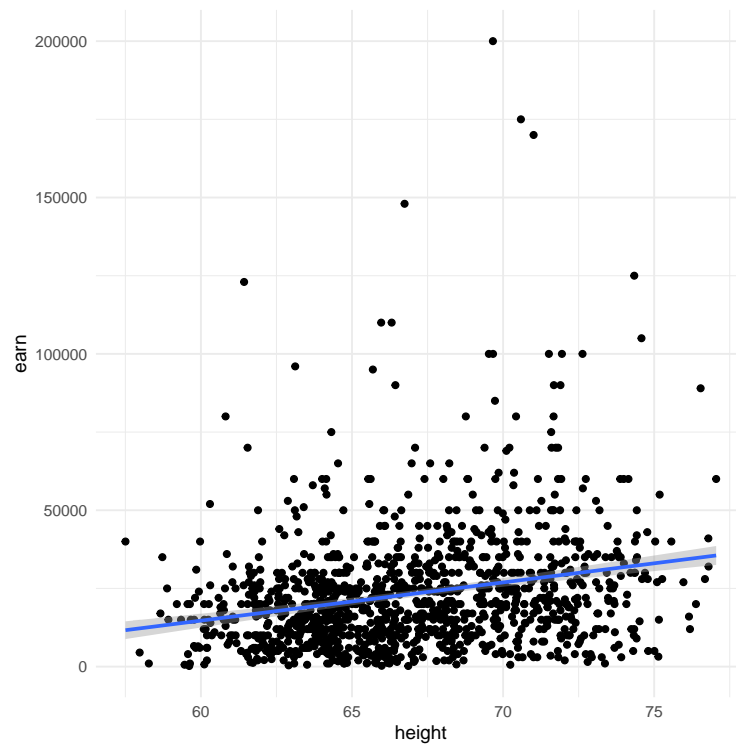
```
## 'age' vs. 'earn'
ggplot(heights_df, aes(x = age, y = earn)) + geom_point()
```



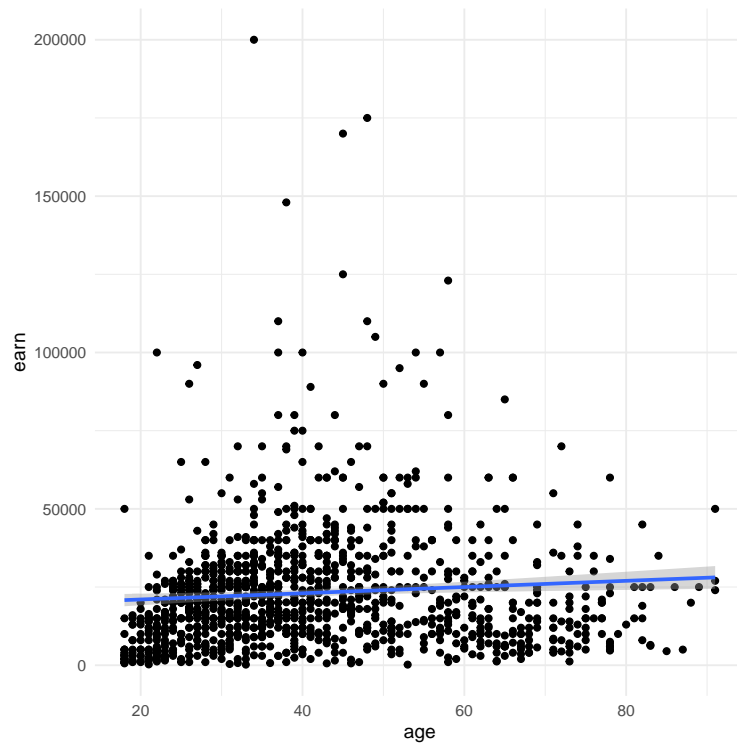
```
## 'ed' vs. 'earn'
ggplot(heights_df, aes(x = ed, y = earn)) + geom_point()
```



```
## 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(method = "lm")
## 'geom_smooth()' using formula = 'y ~ x'
```

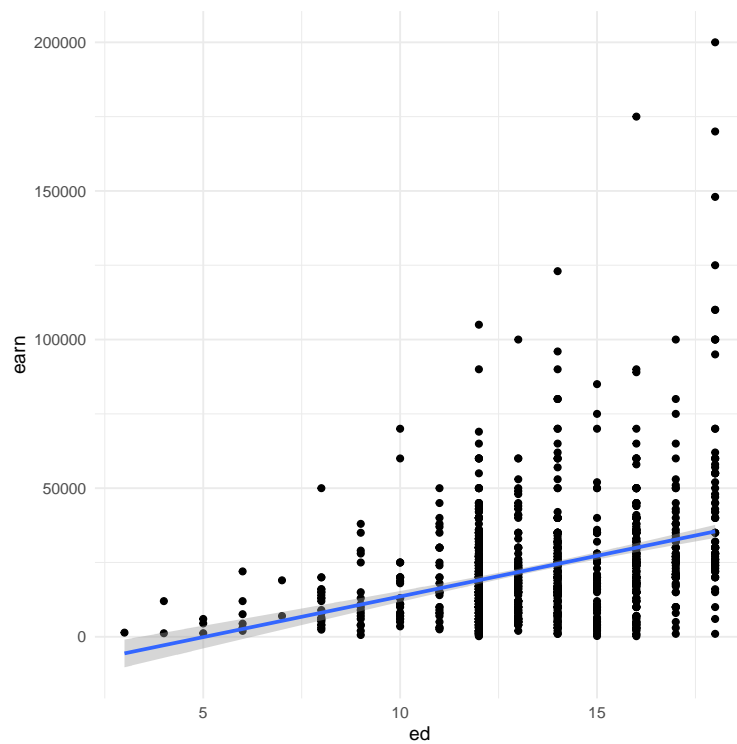


```
## 'age' vs. 'earn'
ggplot(heights_df, aes(x = age, y = earn)) + geom_point() + geom_smooth(method = "lm")
## 'geom_smooth()' using formula = 'y ~ x'
```

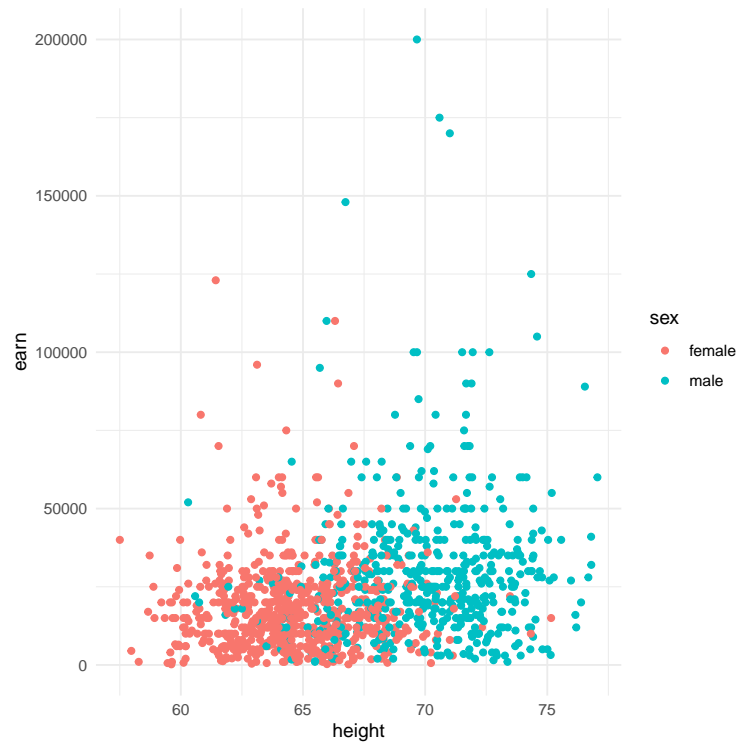


```
## 'ed' vs. 'earn'
ggplot(heights_df, aes(x = ed, y = earn)) + geom_point() + geom_smooth(method = "lm")

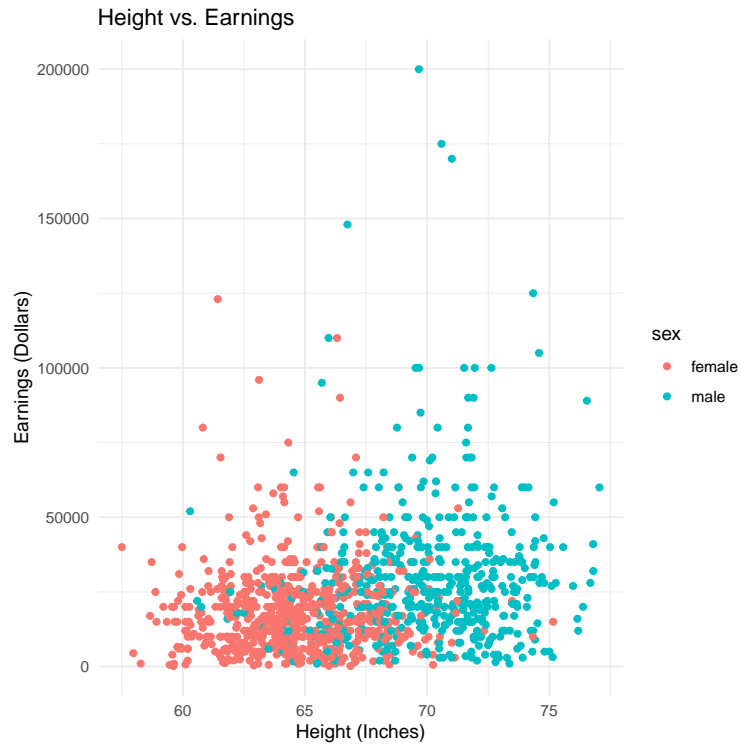
## 'geom_smooth()' using formula = 'y ~ x'
```



```
## Create a scatterplot of 'height' vs. 'earn'. Use 'sex' as the 'col' (color) attribute
ggplot(heights_df, aes(x = height, y = earn, col=sex)) + geom_point()
```

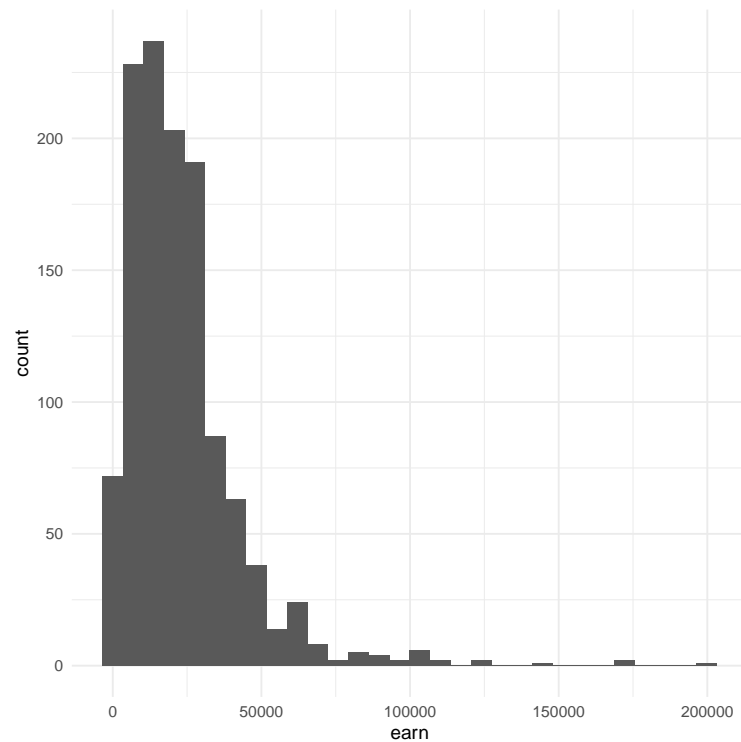


```
## Using 'ggtitle()', 'xlab()', and 'ylab()' to add a title, x label, and y label to the previous plot
## Title: Height vs. Earnings
## X label: Height (Inches)
## Y Label: Earnings (Dollars)
ggplot(heights_df, aes(x = height, y = earn, col=sex)) + geom_point() +
  ggtitle("Height vs. Earnings") +
  xlab("Height (Inches)") +
  ylab("Earnings (Dollars)")
```

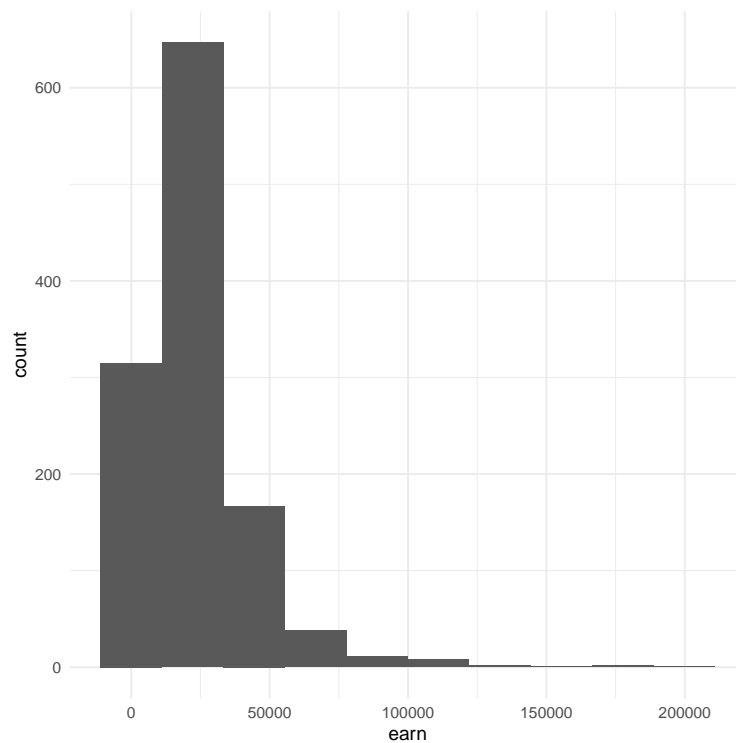


```
# https://ggplot2.tidyverse.org/reference/geom\_histogram.html
## Create a histogram of the 'earn' variable using 'geom_histogram()'
ggplot(heights_df, aes(x = earn)) + geom_histogram()

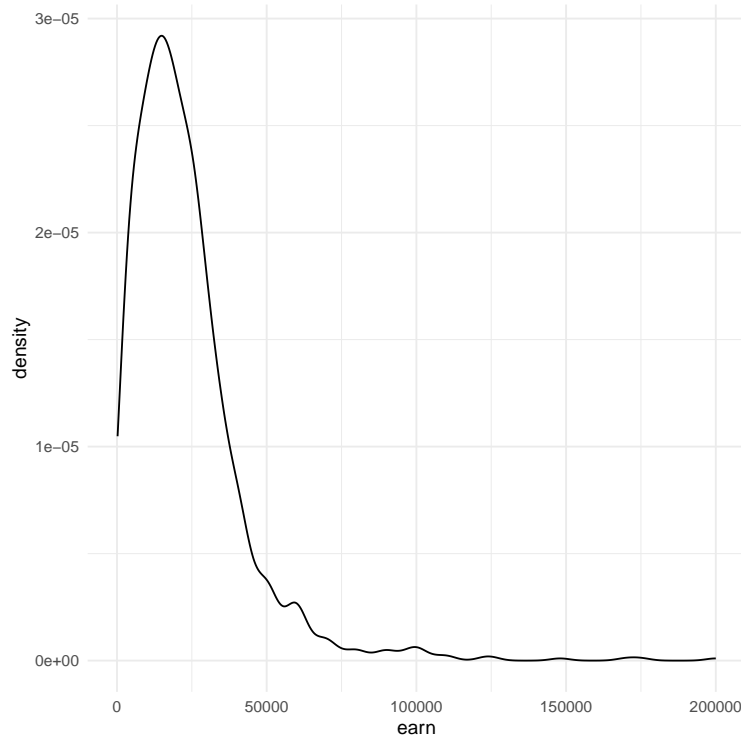
## 'stat_bin()' using 'bins = 30'. Pick better value with 'binwidth'.
```



```
## Create a histogram of the 'earn' variable using 'geom_histogram()'
## Use 10 bins
ggplot(heights_df, aes(x = 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(x = earn)) + geom_density()
```



```
### knitr::stitch("C:\\Users\\21428899\\OneDrive-Bellevue University\\Documents\\GitHub\\dsc520\\assign
```

The R session information (including the OS info, R version and all packages used):

```
sessionInfo()

## R version 4.3.0 (2023-04-21 ucrt)
## Platform: x86_64-w64-mingw32/x64 (64-bit)
## Running under: Windows 11 x64 (build 22000)
##
## Matrix products: default
##
## locale:
## [1] LC_COLLATE=English_United States.utf8  LC_CTYPE=English_United States.utf8
## [3] LC_MONETARY=English_United States.utf8 LC_NUMERIC=C
## [5] LC_TIME=English_United States.utf8
##
## time zone: America/New_York
## tzcode source: internal
##
## attached base packages:
## [1] stats      graphics  grDevices  utils      datasets  methods   base
##
## other attached packages:
## [1] ggplot2_3.4.2
##
## loaded via a namespace (and not attached):
## [1] vctr_0.6.3      nlme_3.1-162    cli_3.6.1       knitr_1.43      rlang_1.1.1
## [6] xfun_0.39       highr_0.10      glue_1.6.2      labeling_0.4.2  colorspace_2.1-0
```



```
## [11] scales_1.2.1      fansi_1.0.4        grid_4.3.0         evaluate_0.21      munsell_0.5.0
## [16] tibble_3.2.1       lifecycle_1.0.3    compiler_4.3.0     pkgconfig_2.0.3    mgcv_1.8-42
## [21] farver_2.1.1       lattice_0.21-8     R6_2.5.1           utf8_1.2.3         pillar_1.9.0
## [26] splines_4.3.0      magrittr_2.0.3     Matrix_1.5-4       tools_4.3.0        withr_2.5.0
## [31] gtable_0.3.3

Sys.time()

## [1] "2023-07-04 10:17:37 EDT"
```