

# assignment\_06\_MunjewarSheetal

Sheetal M

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## Install and Load required packages :

```
# Package names
# packages <- c("ggplot2","dplyr","tidyr","magrittr","tidyverse","purrr")
packages <- c("ggplot2","dplyr","magrittr","tidyverse","purrr","pander","pandoc")

# Install packages not yet installed
installed_packages <- packages %in% rownames(installed.packages())
if (any(installed_packages == FALSE)) {
  install.packages(packages[!installed_packages])
}
```

```
# Packages loading
invisible(lapply(packages, library, character.only = TRUE))
```

```
##
## 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
```

```
## -- Attaching packages ----- tidyverse 1.3.2 --
## v tibble  3.1.8      v purrr   1.0.0
## v tidyr   1.2.1      v stringr 1.5.0
## v readr   2.1.3      v forcats 0.5.2
## -- Conflicts ----- tidyverse_conflicts() --
## x tidyr::extract() masks magrittr::extract()
## x dplyr::filter()  masks stats::filter()
## x dplyr::lag()     masks stats::lag()
## x purrr::set_names() masks magrittr::set_names()
```

## R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

## Markdown Basics Examples :

### Demonstrate Heading:

#### Heading level 1

#### Heading level 2

#### Heading level 3

#### Heading level 4

#### Heading level 5

## Demonstrate fonts Examples :

Demonstrate **bold** word in the sentence.

Demonstrate *Italic* word in the sentence.

### Add a Quote

### Markdown Quotes

What is R Markdown? R Markdown is a way of generating fully reproducible documents, in which both text and code can be combined.

That's how things can be made as bullets,bold, italics, links, or run inline R codes.

### Markdown Nested Quotes

What is R Markdown? R Markdown is a way of generating fully reproducible documents, in which both text and code can be combined.

That's how things can be made as bullets,bold, italics, links, or run inline R codes.

### Markdown Quotes with other elements

**The annual results look great!**

- Revenue was doubled.
- Profits were multifold.

*Everything* worked as per **plan**.

### **Favorite Foods ( Ordered )**

1. Mongo
2. Apple
3. Orange
4. Banana

### **Favorite Foods ( Un-ordered )**

- Mongo
- Apple
- Orange
- Banana

### **Images**

Here's an Marigold flower image, copie randomly from internet:



Move on to next one ... :)

### Add an Equation

$$\dot{x} = \sigma(y - x) \tag{1}$$

$$\dot{y} = \rho x - y - xz \tag{2}$$

$$\dot{z} = -\beta z + xy \tag{3}$$

### Add a Footnote

1

---

<sup>1</sup>This line will be printed as a footnote.

Here is a sample foot note text body reference.<sup>2</sup>

## Add Citations

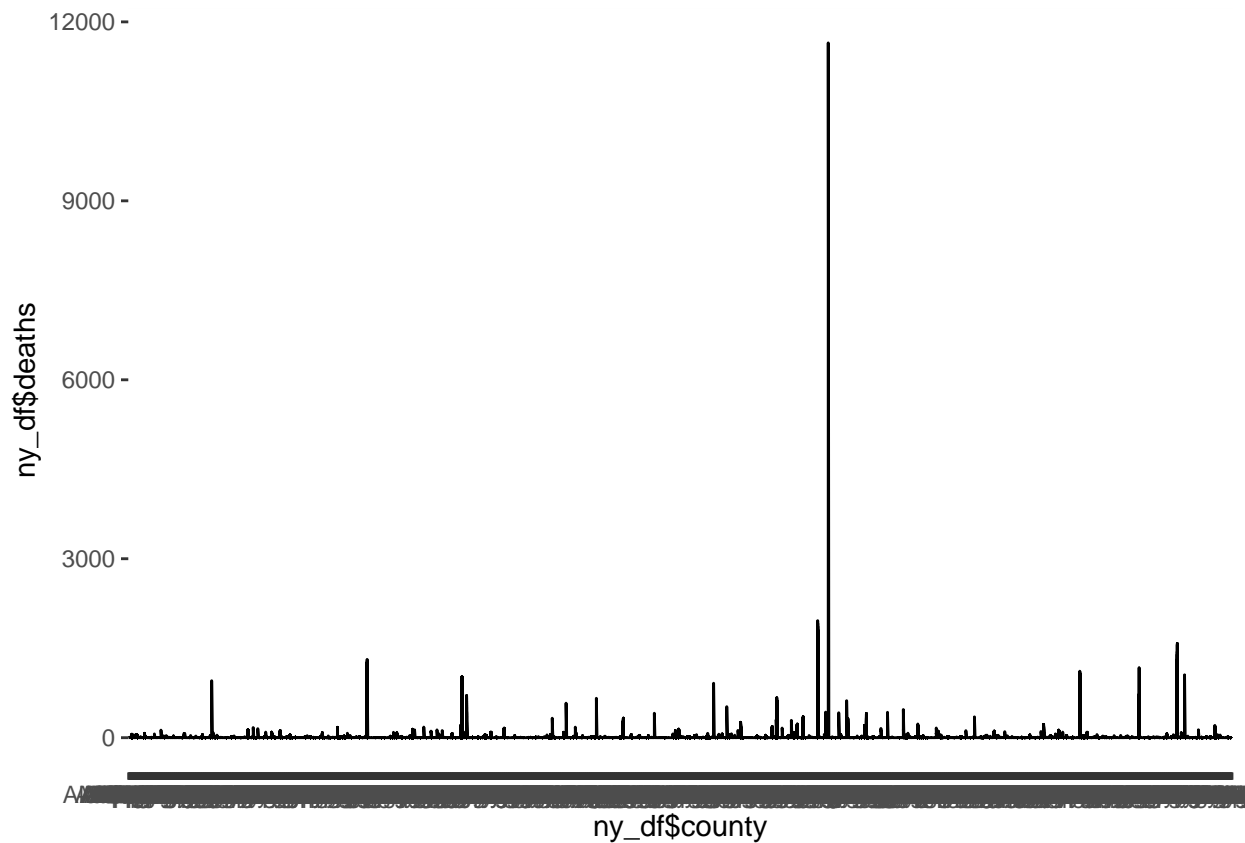
- R for Everyone  
Lander (2014)
- Discovering Statistics Using R  
Field, Miles, and Field (2012)

## Inline Code

### NY Times COVID-19 Data

```
## Warning: Use of 'ny_df$county' is discouraged.  
## i Use 'county' instead.
```

```
## Warning: Use of 'ny_df$deaths' is discouraged.  
## i Use 'deaths' instead.
```

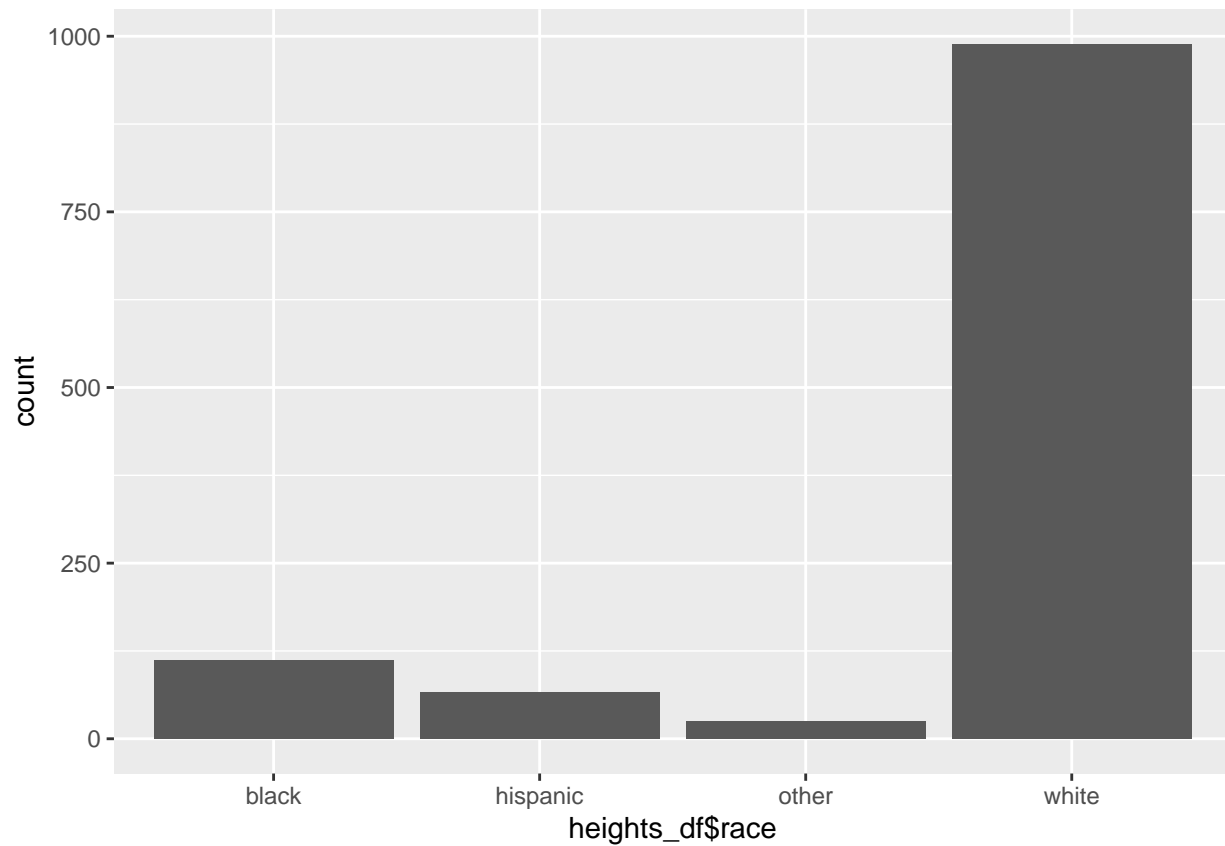


## R4DS Height vs Earnings

---

<sup>2</sup>This footnote will appear at the bottom of the page.

```
## Warning: Use of 'heights_df$race' is discouraged.
## i Use 'race' instead.
```



## Tables

First_Name	Last_Name	Address
Sheetal	Munjewar	Omaha,NE
John	Hopkins	Baltimor,MD

## Knitr Table with Kable

```
setwd("E:\\Data_Science_DSC510\\DSC520-Statistics\\dsc520")
ny_df <- read.csv("data/nytimes/covid-19-data/us-counties.csv")
head(ny_df)
```

```
##      date    county    state  fips  cases  deaths
## 1 2020-01-21 Snohomish Washington 53061      1      0
## 2 2020-01-22 Snohomish Washington 53061      1      0
## 3 2020-01-23 Snohomish Washington 53061      1      0
## 4 2020-01-24      Cook    Illinois 17031      1      0
```

```
## 5 2020-01-24 Snohomish Washington 53061 1 0
## 6 2020-01-25 Orange California 6059 1 0
```

```
knitr::kable(head(ny_df[, 1:4]), "simple", caption = "One Ring to Rule Them All")
```

Table 2: One Ring to Rule Them All

date	county	state	fips
2020-01-21	Snohomish	Washington	53061
2020-01-22	Snohomish	Washington	53061
2020-01-23	Snohomish	Washington	53061
2020-01-24	Cook	Illinois	17031
2020-01-24	Snohomish	Washington	53061
2020-01-25	Orange	California	6059

## Pandoc Table - (multiline, simple, grid, rmarkdown)

```
# Reference - https://cran.r-project.org/web/packages/pander/vignettes/pandoc_table.html
#install.packages("pander")
#install.packages("pandoc")
library(pander) # to load pandoc.table()
library(pandoc)

setwd("E:\\Data_Science_DSC510\\DSC520-Statistics\\dsc520")
ny_df <- read.csv("data/nytimes/covid-19-data/us-counties.csv")
ny_df %>% select(date,state,cases,deaths) %>% head(.,n=10)
```

```
##          date      state cases deaths
## 1 2020-01-21 Washington     1      0
## 2 2020-01-22 Washington     1      0
## 3 2020-01-23 Washington     1      0
## 4 2020-01-24 Illinois      1      0
## 5 2020-01-24 Washington     1      0
## 6 2020-01-25 California     1      0
## 7 2020-01-25 Illinois      1      0
## 8 2020-01-25 Washington     1      0
## 9 2020-01-26 Arizona       1      0
## 10 2020-01-26 California     1      0
```

```
m <- ny_df %>% select(date,state,cases,deaths) %>% head(.,n=10)
colnames(m) <- c('Date', 'State', 'Cases', 'Deaths')
pandoc.table(m, keep.line.breaks = TRUE)
```

```
##
## -----
##      Date      State      Cases  Deaths
## -----
## 2020-01-21 Washington     1      0
```

```
##
## 2020-01-22 Washington 1 0
##
## 2020-01-23 Washington 1 0
##
## 2020-01-24 Illinois 1 0
##
## 2020-01-24 Washington 1 0
##
## 2020-01-25 California 1 0
##
## 2020-01-25 Illinois 1 0
##
## 2020-01-25 Washington 1 0
##
## 2020-01-26 Arizona 1 0
##
## 2020-01-26 California 1 0
## -----
```

```
pandoc.table(m, keep.line.breaks = TRUE, style='simple')
```

```
##
##
##      Date      State    Cases  Deaths
## -----
## 2020-01-21 Washington 1      0
## 2020-01-22 Washington 1      0
## 2020-01-23 Washington 1      0
## 2020-01-24 Illinois  1      0
## 2020-01-24 Washington 1      0
## 2020-01-25 California 1      0
## 2020-01-25 Illinois  1      0
## 2020-01-25 Washington 1      0
## 2020-01-26 Arizona   1      0
## 2020-01-26 California 1      0
```

```
pandoc.table(m, keep.line.breaks = TRUE, style='grid')
```

```
##
##
## +-----+-----+-----+-----+
## |   Date   |   State   | Cases | Deaths |
## +=====+=====+=====+=====+
## | 2020-01-21 | Washington |    1  |    0    |
## +-----+-----+-----+-----+
## | 2020-01-22 | Washington |    1  |    0    |
## +-----+-----+-----+-----+
## | 2020-01-23 | Washington |    1  |    0    |
## +-----+-----+-----+-----+
## | 2020-01-24 | Illinois  |    1  |    0    |
## +-----+-----+-----+-----+
## | 2020-01-24 | Washington |    1  |    0    |
```



```
## +-----+-----+-----+-----+
## | 2020-01-25 | California |    1    |    0    |
## +-----+-----+-----+-----+
## | 2020-01-25 | Illinois   |    1    |    0    |
## +-----+-----+-----+-----+
## | 2020-01-25 | Washington |    1    |    0    |
## +-----+-----+-----+-----+
## | 2020-01-26 | Arizona   |    1    |    0    |
## +-----+-----+-----+-----+
## | 2020-01-26 | California |    1    |    0    |
## +-----+-----+-----+-----+
```

## References

- Field, A., J. Miles, and Z. Field. 2012. *Discovering Statistics Using r*. SAGE Publications. <https://books.google.com/books?id=wd2K2zC3swIC>.
- Lander, J. P. 2014. *R for Everyone: Advanced Analytics and Graphics*. Addison-Wesley Data and Analytics Series. Addison-Wesley. <https://books.google.com/books?id=3eBVAgAAQBAJ>.