# Untitled

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## **PROLOGUE**

A long time ago, in a galaxy far, far away...

The Clone Wars were over, leaving entire civilizations in ruin. The Jedi Knights were all but extinct. And the Old Republic — the democratic galactic government that had prevailed for almost 25,000 years — had been replaced by the Galactic Empire.

Yet the Empire's supreme ruler, the evil Emperor Palpatine, remained hungry for even more power. To expand his rule and crush all remnants of the Old Republic, Palpatine had approved the construction of a secret weapon: the *Death Star*, an immense armored space station that could destroy an entire planet.

The Empire was not without opposition. The Alliance to Restore the Republic — commonly known as the Rebel Alliance — led the fight to overturn the Empire and bring justice and freedom back to the galaxy.

After Rebel spies learned of the *Death Star* project, they managed to intercept an Imperial transmission of the space station's technical data. The Rebels hoped the data would reveal a way to destroy the Death Star. The Empire was determined to recover the stolen plans . . . now in the possession of a young Senator from the planet *Alderaan*, Princess Leia Organa.

## CHAPTER ONE

Bursts of laserfire streaked after the consular starship  $Tantive\ IV$ , which was racing for the planet Tatooine. The ship was fleeing from the Devastator, an immense Imperial Star Destroyer that was firing nearly all its turbolasers at the elusive ship. Both vessels had just entered Tatooine's orbit when the Devastator's lasers scored a direct hit on the  $Tantive\ IV$ 's primary sensor array. The array exploded, and the blast overloaded the starboard shield projector — which caused another explosion, damaging the power generator system and triggering a chain reaction throughout the ship. With no starboard shield and no power to its engines, the  $Tantive\ IV$  was effectively crippled.

Inside the battered *Tantive IV*, the crew raced to extinguish fires as more blasts rocked the ship. Struggling to remain on their feet, Rebel crewmen and troops ran through a narrow white-walled passageway, taking little notice of the two robots that stumbled along with them. The droids were C-3PO, a gold-plated humanoid protocol droid, and his counterpart R2-D2, an astromech with a domed head and cylindrical body who moved on three legs.

"Did you hear that?" C-3PO said to R2-D2 as the *Tantive IV*'s engines powered down. "They've shut down the main reactor. We'll be destroyed for sure. This is madness!"

More Rebel troops ran into the main corridor. The two droids stepped aside into a shallow alcove to avoid being trampled. The Rebels took up defensive positions and aimed their weapons at a sealed hatch at the end of the corridor.

C-3PO said, "We're doomed!"

R2-D2 replied with a series of beeps and whistles.

## Data

```
# Inspect data
head(starwars[, 1:6]);
```

```
## # A tibble: 6 x 6
##
               name height mass hair_color skin_color eye_color
##
              <chr>
                     <int> <dbl>
                                         <chr>
                                                     <chr>
                                                                <chr>
## 1 Luke Skywalker
                        172
                               77
                                         blond
                                                      fair
                                                                 blue
## 2
              C-3P0
                        167
                               75
                                          <NA>
                                                      gold
                                                               yellow
## 3
              R2-D2
                         96
                               32
                                          <NA> white, blue
                                                                  red
## 4
        Darth Vader
                        202
                              136
                                         none
                                                     white
                                                               yellow
## 5
        Leia Organa
                        150
                               49
                                         brown
                                                     light
                                                                brown
## 6
          Owen Lars
                        178
                              120 brown, grey
                                                     light
                                                                 blue
```

## Images and plots

## External image

The imperial seal.

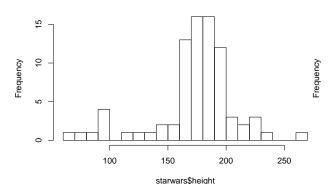
```
# Show external image
knitr::include_graphics("imperialseal.jpg")
```



## Base R histogram

Histograms of the height and log10-transformed mass distributions of all Star Wars characters.

```
# We can plot figures side-by-side by using code chunk option fig.show="hold"
hist(starwars$height, breaks = 20);
hist(log10(starwars$mass), breaks = 20);
```



Histogram of starwars\$height

# 1.5 2.0 2.5 3.0

log10(starwars\$mass)

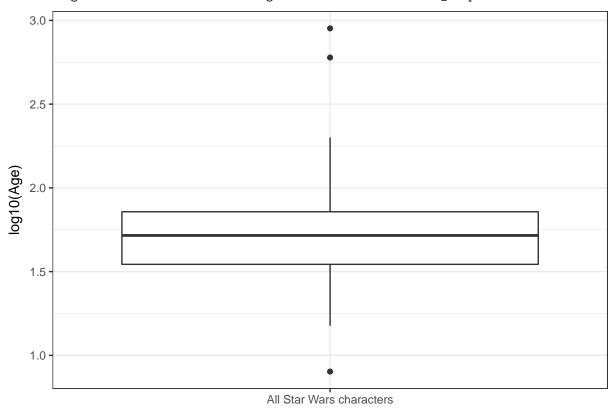
Histogram of log10(starwars\$mass)

## Boxplot using ggplot2

Boxplot of the age distribution.

```
library(ggplot2);
ggplot(data = starwars, aes(x = "All Star Wars characters", y = log10(birth_year))) +
  geom_boxplot() + theme_bw() + labs(x = "", y = "log10(Age)");
```

## Warning: Removed 44 rows containing non-finite values (stat\_boxplot).



## **Table**

# Using kable

```
# Layout table using kable
knitr::kable(starwars[1:10, 1:6], caption = "Sample data of 10 Star Wars characters");
```

Table 1: Sample data of 10 Star Wars characters

name	height	mass	hair_color	skin_color	eye_color
Luke Skywalker	172	77	blond	fair	blue
C-3PO	167	75	NA	gold	yellow
R2-D2	96	32	NA	white, blue	red
Darth Vader	202	136	none	white	yellow
Leia Organa	150	49	brown	light	brown
Owen Lars	178	120	brown, grey	light	blue
Beru Whitesun lars	165	75	brown	light	blue
R5-D4	97	32	NA	white, red	$\operatorname{red}$
Biggs Darklighter	183	84	black	light	brown
Obi-Wan Kenobi	182	77	auburn, white	fair	blue-gray

# Using pander

```
# Layout table using pander
# Note the use of code chunk option results="asis" in the Rmd source file
suppressWarnings(library(pander));
pander::pandoc.table(
```

```
starwars[(nrow(starwars)-10):nrow(starwars), 1:6],
caption = "Sample data of 10 Star Wars characters");
```

Table 2: Sample data of 10 Star Wars characters

name	height	mass	hair_color	$skin\_color$	eye_color
Grievous	216	159	none	brown, white	green, yellow
Tarfful	234	136	brown	$\operatorname{brown}$	blue
Raymus Antilles	188	79	brown	light	brown
Sly Moore	178	48	none	pale	white
Tion Medon	206	80	none	grey	black
$\operatorname{Finn}$	NA	NA	black	$\operatorname{dark}$	$\operatorname{dark}$
Rey	NA	NA	brown	light	hazel
Poe Dameron	NA	NA	brown	light	brown
BB8	NA	NA	none	none	black
Captain Phasma	NA	NA	unknown	unknown	unknown
Padmé Amidala	165	45	brown	light	brown

## Using xtable

```
# Layout table using xtable
# Note the use of code chunk option results="asis" in the Rmd source file
# Note: This only produces LaTeX/HTML output
suppressWarnings(library(xtable));
print(xtable(
    starwars[sample.int(nrow(starwars), 10), 1:6],
    caption = "Sample data of 10 random Star Wars characters"),
    comment=FALSE);
```

	name	height	mass	hair_color	skin_color	eye_color
1	Rugor Nass	206		none	green	orange
2	R2-D2	96	32.00		white, blue	$\operatorname{red}$
3	Mon Mothma	150		auburn	fair	blue
4	Bail Prestor Organa	191		black	tan	brown
5	Rey			brown	light	hazel
6	Jango Fett	183	79.00	black	tan	brown
7	BB8			none	none	black
8	Adi Gallia	184	50.00	none	dark	blue
9	Jek Tono Porkins	180	110.00	brown	fair	blue
10	Zam Wesell	168	55.00	blonde	fair, green, yellow	yellow

Table 3: Sample data of 10 random Star Wars characters