How to Make a Histogram in R

Download and install R (https://cloud.r-project.org) and RStudio Desktop (https://www.rstudio.com/products/rstudio/download/)

Open RStudio

To install ggplot2:

```
> install.packages("ggplot2")
```

To load ggplot2:

```
> library(ggplot2)
```

To import your data:

```
> data1 <- read.csv(file.choose(), header=TRUE)
```

To see what the data looks like to R:

```
> View(data1)
```

To make a simple histogram:

```
> ggplot(data=data1, aes(data1$Length.um)) + geom_histogram()
```

To change bin width:

```
> ggplot(data=data1, aes(data1$SHAPE.length)) +
geom_histogram(breaks=seq(0, 10, by=1))
```

To adjust colors:

```
> ggplot(data=data1, aes(data1$SHAPE.length)) +
geom_histogram(breaks=seq(0, 10, by=1), col = "blue", fill =
"green")
```

To add labels:

```
> ggplot(data=data1, aes(data1$SHAPE.length)) +
geom_histogram(breaks=seq(0, 10, by=1), col = "blue", fill =
"green")
     + labs(title = "TrmB + Glucose", x = "Length", y = "Count")
```

To change the tick marks on the x axis:

```
> ggplot(data=data1, aes(data1$Length.um)) +
geom_histogram(breaks=seq(0, 10, by=1), col = "blue", fill =
"green") + labs(title = "TrmB + Glucose", x = "Length(um)", y =
"Count")
     + scale_x_continuous(breaks=seq(0,10,1))
```

To format the plot theme:

```
> ggplot(data=data2, aes(data1$Length.um)) +
geom_histogram(breaks=seq(0, 10, by=1), col = "blue", fill =
"green") + labs(title = "TrmB + Glucose", x = "Length(um)", y =
"Count") + scale_x_continuous(breaks=seq(0,10,1))
     + theme(panel.grid.major = element_blank(),
panel.grid.minor = element_blank(), panel.background =
element_blank(), axis.line = element_line(color = "black"))
```

To format the axis labels and text:

```
> ggplot(data=data2, aes(data2$Length.um)) +
geom_histogram(breaks=seq(0, 10, by=1), col = "blue", fill =
"green") + labs(title = "TrmB + Glucose", x = "Length(um)", y =
"Count") + scale_x_continuous(breaks=seq(0,10,1)) +
theme(panel.grid.major = element_blank(), panel.grid.minor =
element_blank(), panel.background = element_blank(), axis.line =
element_line(color = "black"), axis.text =
element_text(size=14), axis.title =
element_text(size=14,face="bold"), plot.title =
element_text(size=18,face="bold", hjust=0.5))
```

Export your plot