



```
summary(df)
```

```
##      Date      Production Line  Product Type    Units Produced
## Min.   :2025-07-01  Length:186      Length:186      Min.    : 801
## 1st Qu.:2025-07-08  Class :character  Class :character 1st Qu. : 917
## Median :2025-07-16  Mode  :character  Mode  :character Median :1012
## Mean   :2025-07-16                                     Mean   :1008
## 3rd Qu.:2025-07-24                                     3rd Qu.:1088
## Max.   :2025-07-31                                     Max.   :1198
## Defective Units Top Defect Type      Shift      Operator ID
## Min.    :11.00  Length:186      Length:186      Length:186
## 1st Qu. :25.25  Class :character  Class :character Class :character
## Median  :37.50  Mode  :character  Mode  :character Mode  :character
## Mean    :37.45
## 3rd Qu. :47.75
## Max.    :79.00
## Supplier
## Length:186
## Class :character
## Mode  :character
##
##
```

```
# Replace missing defect type with "None"
```

```
df <- df %>%
  mutate(`Top Defect Type` = ifelse(is.na(`Top Defect Type`), "None", `Top Defect Type`))
```

```
df %>%
```

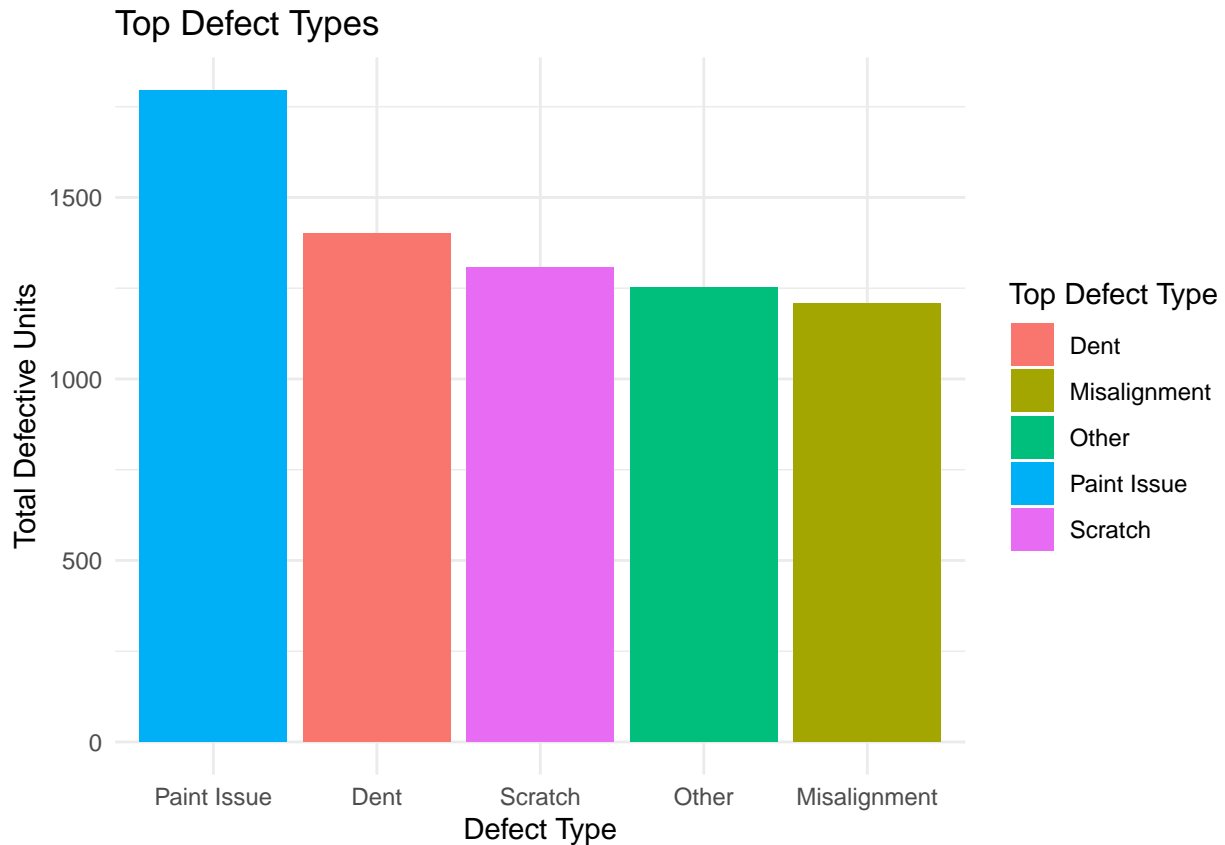
```
  group_by(`Top Defect Type`) %>%
```

```
  summarise(Total_Defects = sum(`Defective Units`)) %>%
```

```
  arrange(desc(Total_Defects)) %>%
```

```
  ggplot(aes(x = reorder(`Top Defect Type`, -Total_Defects), y = Total_Defects, fill = `Top Defect Type`)) +
  geom_col() +
```

```
  labs(title = "Top Defect Types", x = "Defect Type", y = "Total Defective Units") +
  theme_minimal()
```



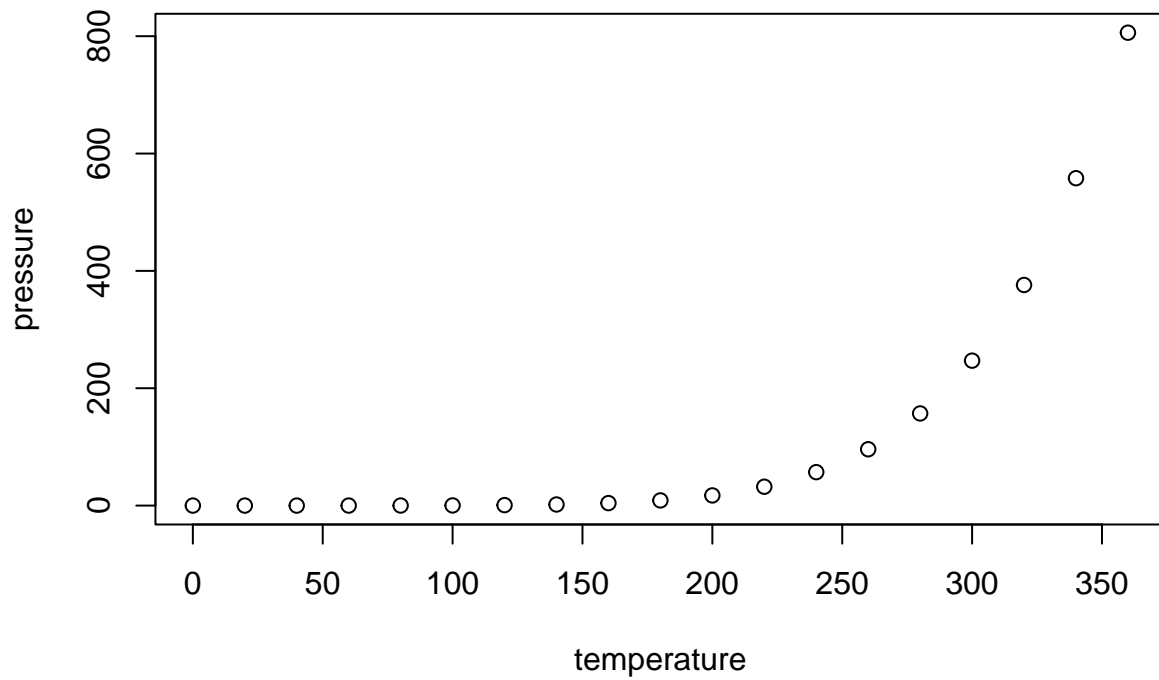
## R Markdown

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:

## Including Plots

You can also embed plots, for example:



Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot.