Case Study 8

Jing Miao

2024-10-24

Installation

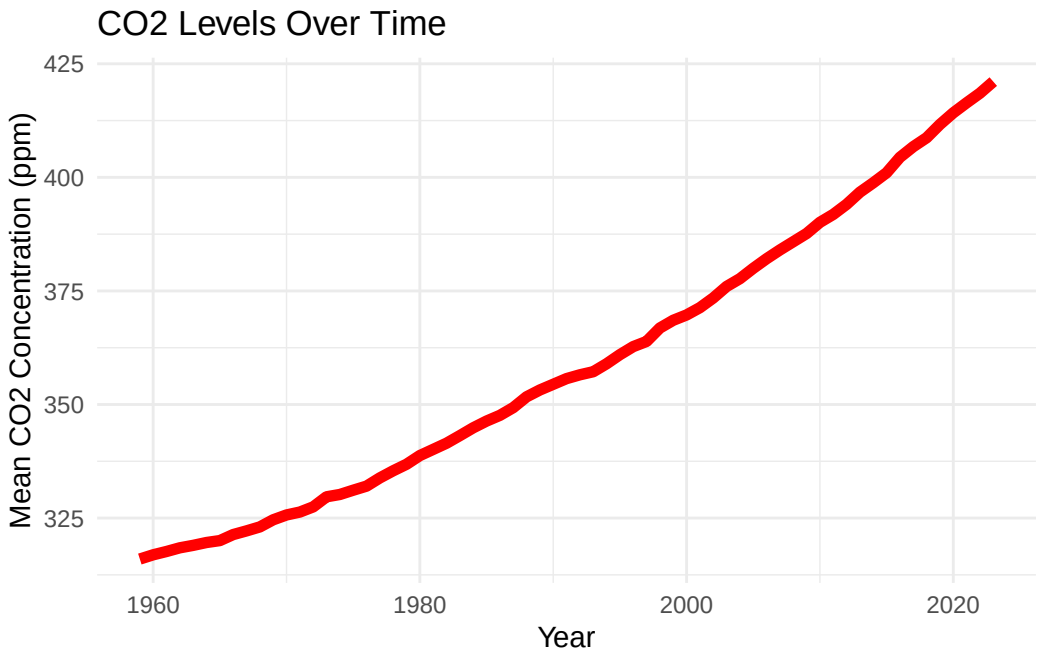
```
# install and load the necessary packages
# install.packages("kableExtra") # for table
library(ggplot2)
library(knitr)
library(kableExtra)
library(dplyr)
```

Data

```
# Download the data and save it.
annualCO2 <- read.table("ftp://aftp.cmdl.noaa.gov/products/trends/co2/co2_annmean_mlo.txt", s
colnames(annualCO2) <- c("year", "mean", "anc")
```

Plot

```
# Create the time series plot using ggplot2
ggplot(data = annualCO2, aes(x = year, y = mean)) +
  geom_line(color = "red", size = 2) +
  labs(title = "CO2 Levels Over Time",
       x = "Year",
       y = "Mean CO2 Concentration (ppm)") +
  theme_minimal()
```



Table

```
# print the top five of the table

table <- annualCO2 %>%
  arrange(desc(mean)) %>%
  slice_head(n = 5)

knitr::kable(table) %>%
  kable_styling(position = "center")
```

year	mean	anc
2023	421.08	0.12
2022	418.53	0.12
2021	416.41	0.12
2020	414.21	0.12
2019	411.65	0.12

```
# knitr::kable(table) %>%
# as_image(width = 10,file = "table.png")
```

```
# quarto::quarto_render("E:\\repos\\case-studies-jingmiao7\\week_08\\case_study_08.qmd", outp
```