Assignment 6

When I click on my Rstudio link in my assignment\_6 folder it does not open my saved work. I have to change my project every time in order to see it.

dat <- read.csv("Data\_Course\_Rasmussen/Data/BioLog\_Plate\_Data.csv")

view(dat)

tidy\_data <- dat %>%

pivot\_longer(cols = starts\_with("Hr\_"),

names\_to = "Time",

values\_to = "Absorbance") %>%

mutate(Time = as.numeric(str\_extract(Time, "\\d+")))

tidy\_data <- tidy\_data %>%

mutate(SampleType = case\_when(

str\_detect(Sample.ID, regex("Clear\_Creek", ignore\_case = TRUE)) ~ "Clear\_Creek",

str\_detect(Sample.ID, regex("Soil\_1", ignore\_case = TRUE)) ~ "Soil\_1",

str\_detect(Sample.ID, regex("Soil\_2", ignore\_case = TRUE)) ~ "Soil\_2",

str\_detect(Sample.ID, regex("Waste\_Water", ignore\_case = TRUE)) ~ "Waste\_Water",

TRUE ~ "Other"

))

filtered\_data <- tidy\_data %>%

filter(SampleType %in% c("Clear\_Creek", "Soil\_1", "Soil\_2", "Waste\_Water"))

mean\_data <- filtered\_data %>%

group\_by(Time, SampleType, Dilution) %>%

summarize(MeanAbsorbance = mean(Absorbance, na.rm = TRUE))

plot <- ggplot(mean\_data, aes(x = Time, y = MeanAbsorbance, color = SampleType)) +

geom\_line() +

facet\_grid(. ~ Dilution, scales = "free\_y", labeller = labeller(Dilution = c(`0.001` = "0.001", `0.01` = "0.01", `0.1` = "0.1"))) +

labs(title = "Mean Absorbance Values for Itaconic Acid",

x = "Time (hours)",

y = "Mean Absorbance",

color = "Sample Type") +

theme\_minimal() +

theme(

axis.title.y = element\_text(vjust = 1),

axis.text.y = element\_text(vjust = 1),

axis.ticks.y = element\_line(),

axis.line.y = element\_line(),

strip.background = element\_blank(),

strip.text.x = element\_text(size = 12, face = "bold"),

panel.spacing = unit(0.5, "lines"),

strip.placement = "outside"

) +

scale\_y\_continuous(limits = c(0, 2.5)) +

transition\_reveal(Time)

anim\_save("itaconic\_acid\_animation.gif", plot)

print(plot)