Homework 1 - Adv Data Prog with R

AUTHOR

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Introduction

The dataset that's used is the CO_2 dataset present in the `datasets`. The CO_2 data set basically contains data from a study from an experiment on the cold tolerance of grass plants. It records the rate of CO_2 uptake (photosynthesis) by different plants by exposing varying concentrations of ambient CO_2, under different treatment conditions.

Descriptive Statistics

Mean Carbon Dioxide Uptake by Type and Treatment

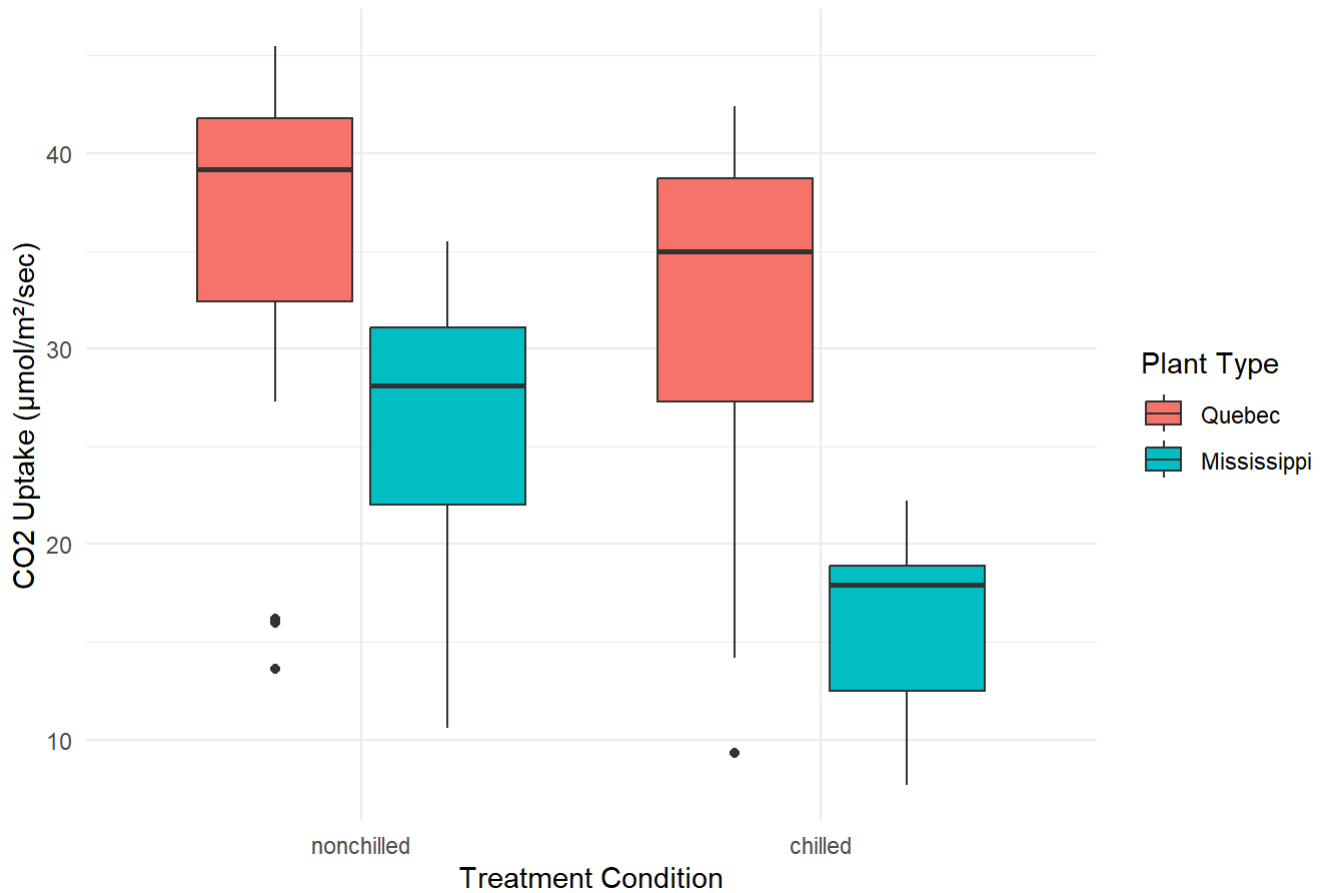| Type	Treatment	Mean_Uptake	SD_Uptake	Count
Quebec	nonchilled	35.33	9.60	21
Quebec	chilled	31.75	9.64	21
Mississippi	nonchilled	25.95	7.40	21
Mississippi	chilled	15.81	4.06	21

Interpretation

From the above table, we can see that there 21 plants in each group, and we observe the following

- CO_2 Absorption: **Quebec - Nonchilled plants**

- CO_2 Absorption: **Mississippi - Chilled plants**

Plot - Effect of Chilling on CO2 Uptake by Plant Type

Effect of Chilling on CO2 Uptake by Plant Type

Interpretation

From the above plot we can clearly see that Quebec plants has a higher CO_2 update than the Missisippi plants, and we also see that that nonchilled plants (in comparatively less cold) environments have more absorption than plants in chilled environments.