High School Alcoholism and Academic Performance

BDA 2025 GrosseDaten

Google Colab notebook

https://colab.research.google.com/drive/1pcIpyWptryqBZfFNfx2YKgYegZJ2JiA9

Dataset in use
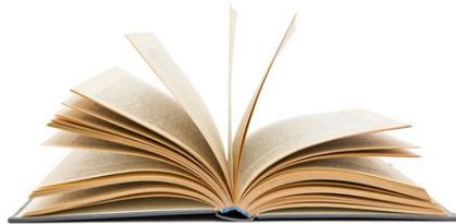
https://www.kaggle.com/datasets/gabrielluizone/high-school-alcoholism-and-academic-performance
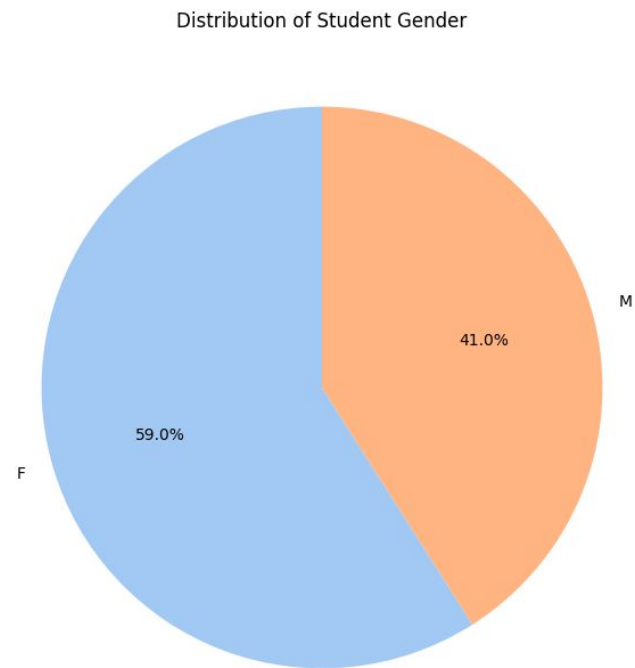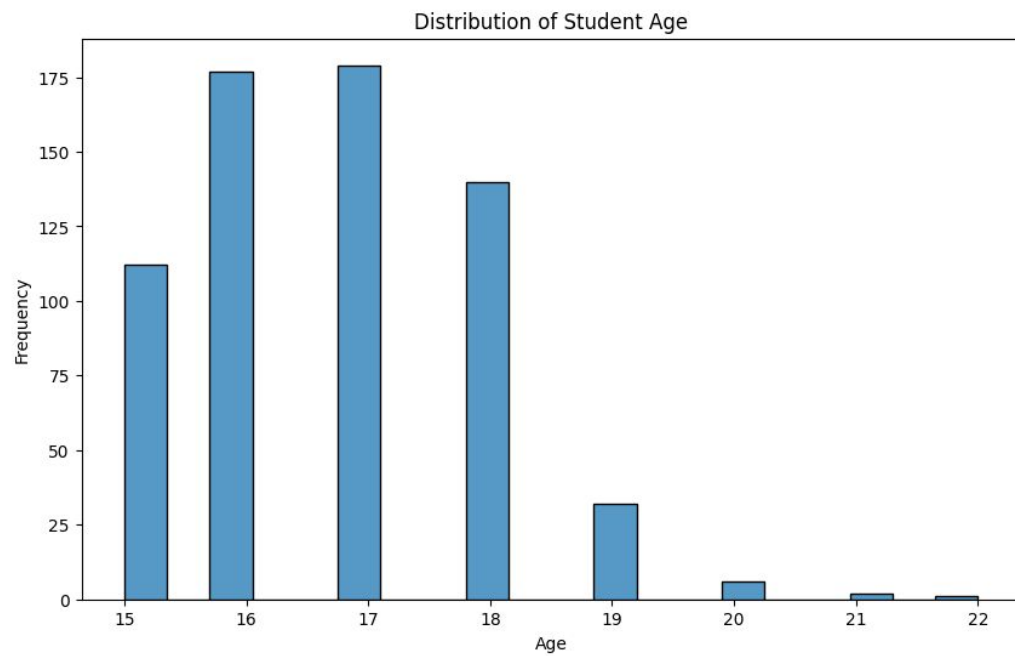
31 x 649

features   rows

Features

school
sex
age
address
famsize
Pstatus
Medu
Fedu
Mjob
Fjob
reason
guardian
traveltime
studytime
schoolsup
famsup

paid
activities
nursery
higher
internet
romantic
famrel
freetime
goout
Dalc
Walc
health
absences
G1
G2

Distribution of Student Age

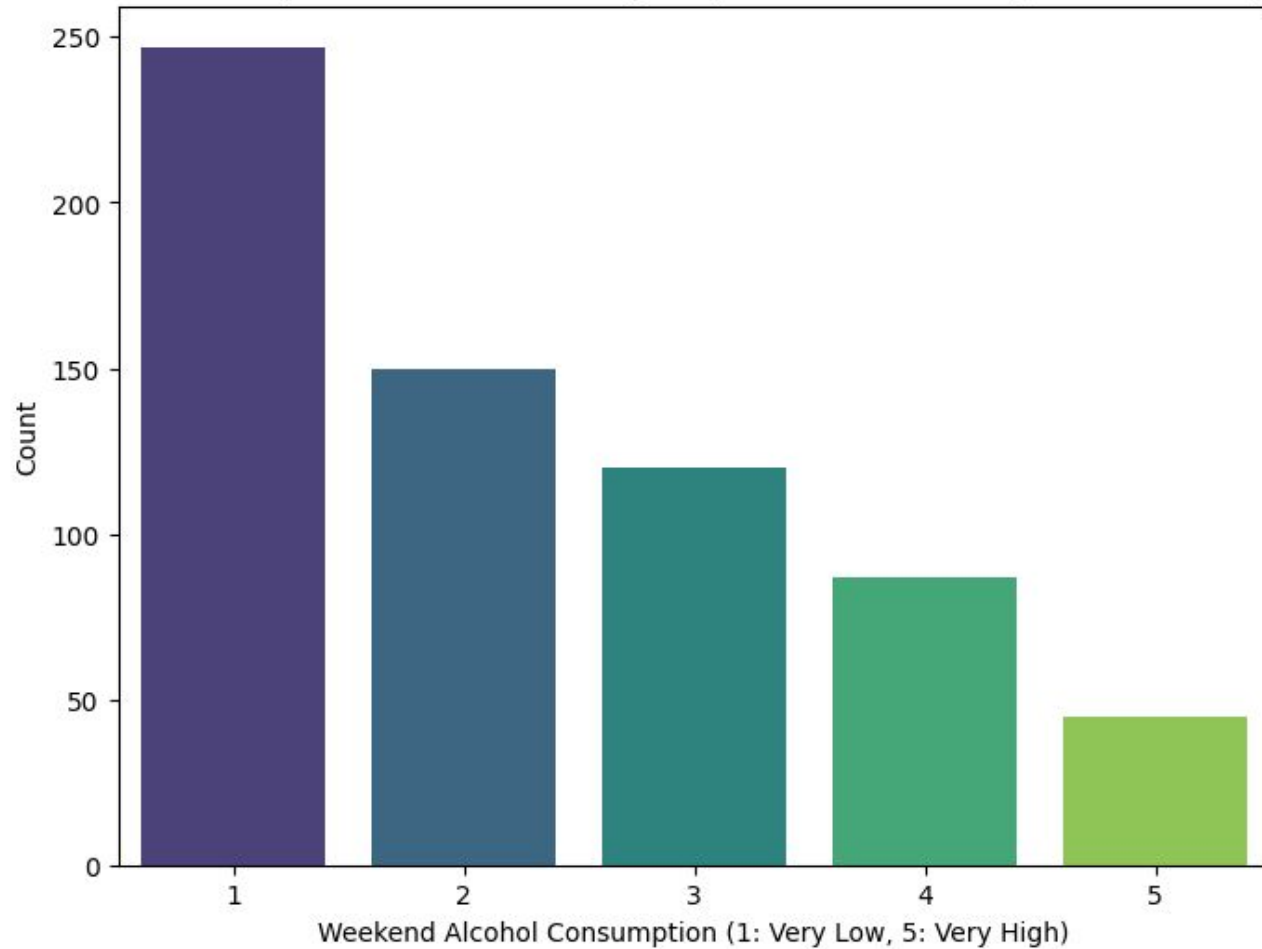## Distribution of Student Gender

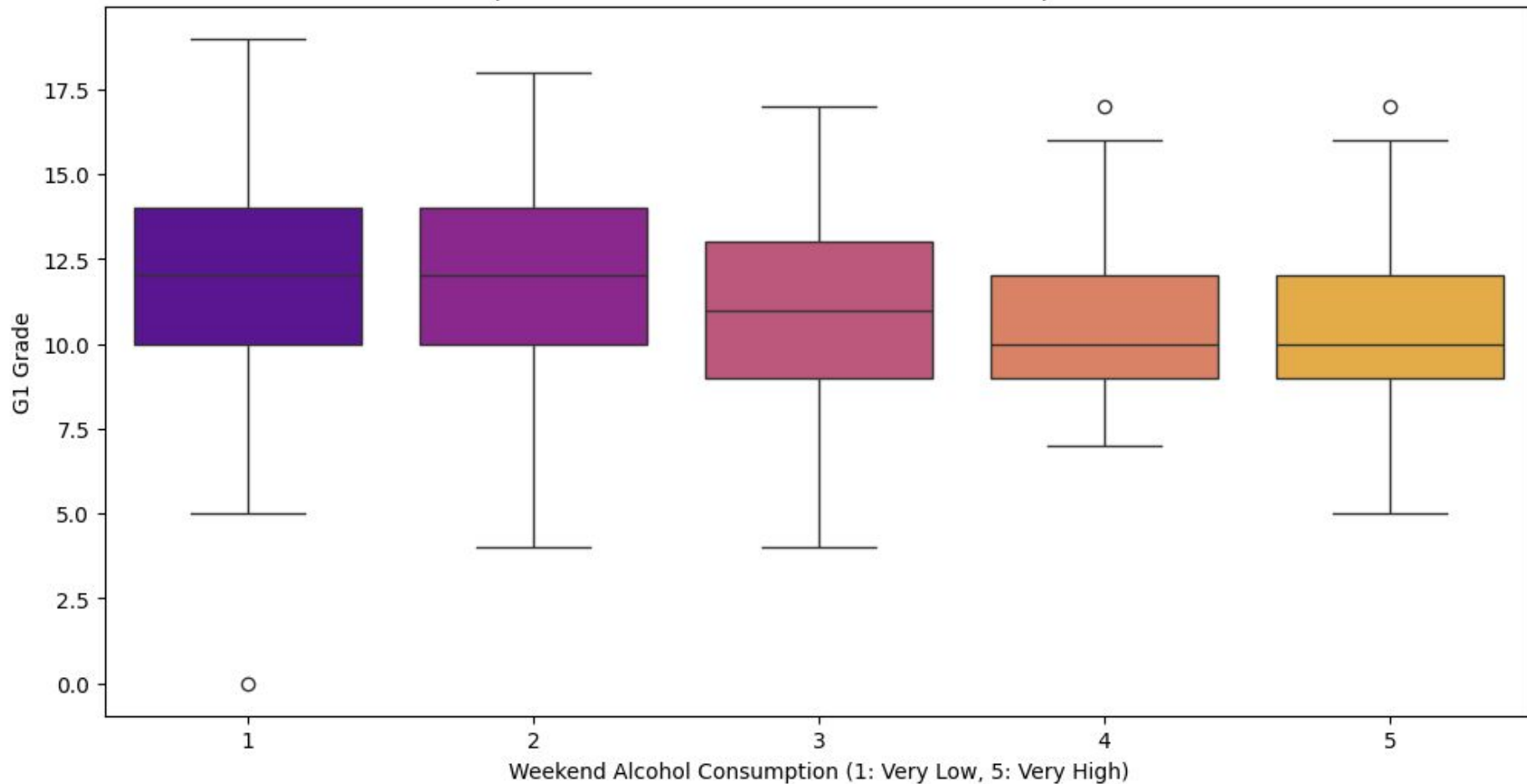Alcohol consumption on the work day (categorical: from 1 - very low to 5 - very high)
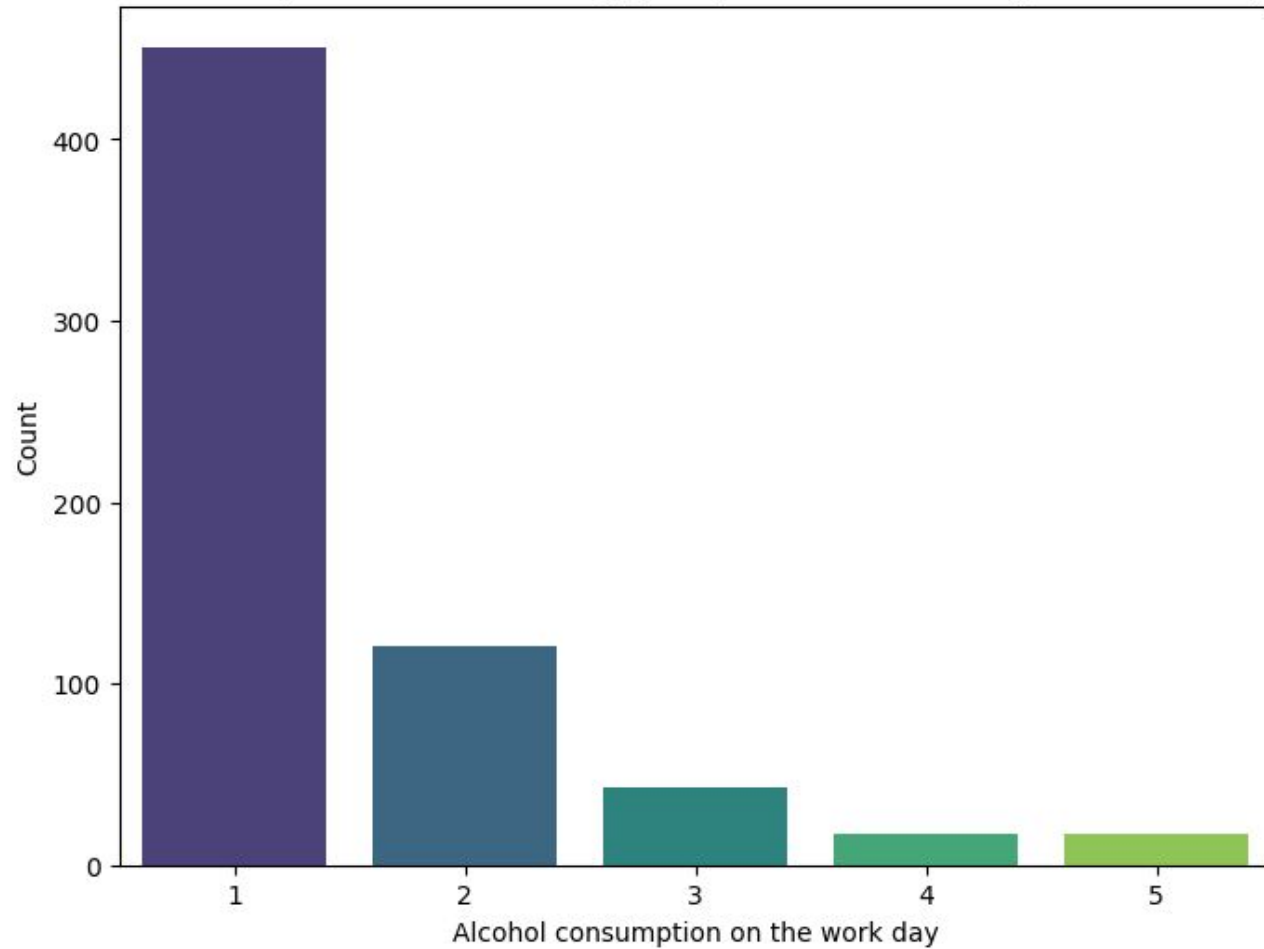
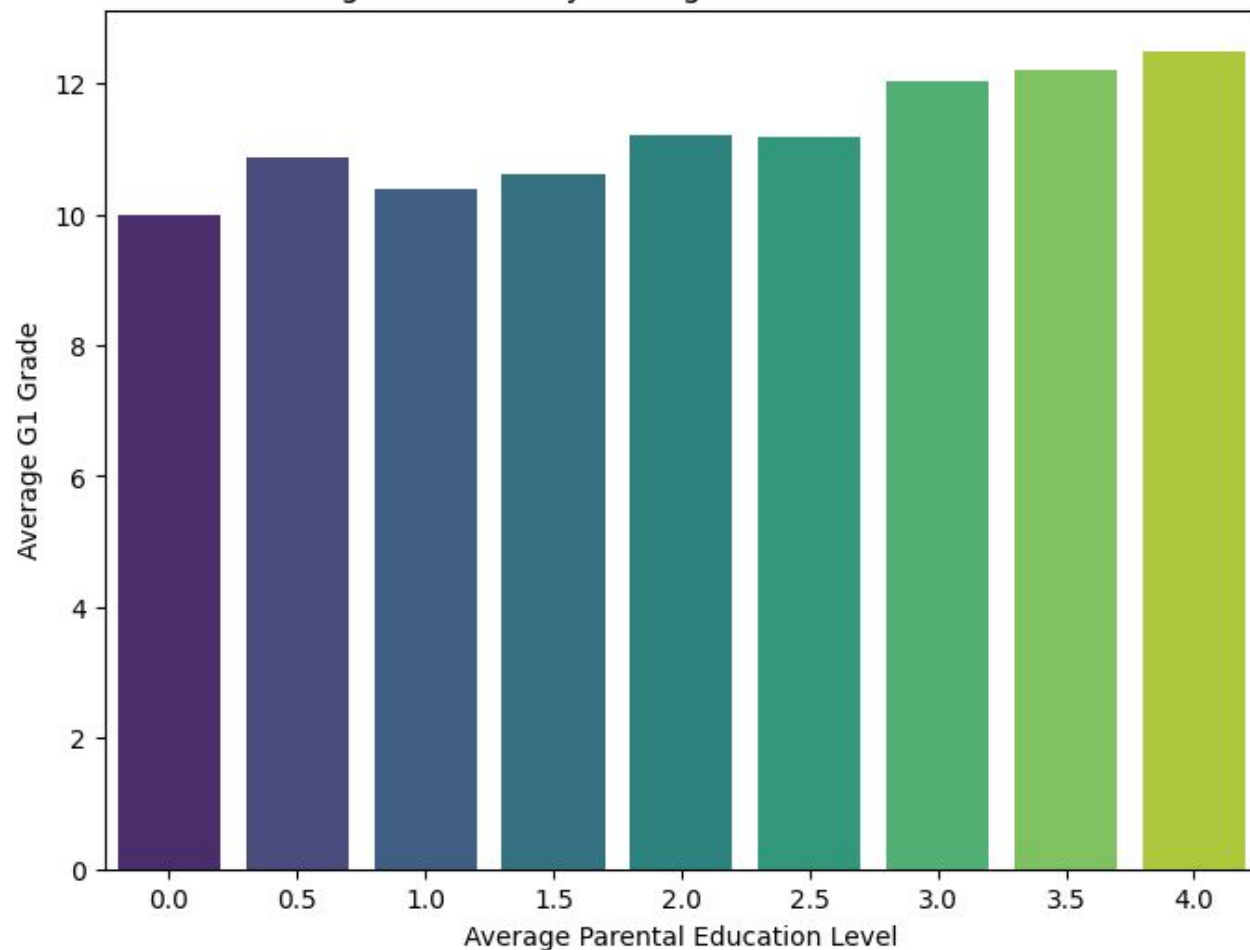Relationship between G1 Grades and Alcohol Consumption on Workdays
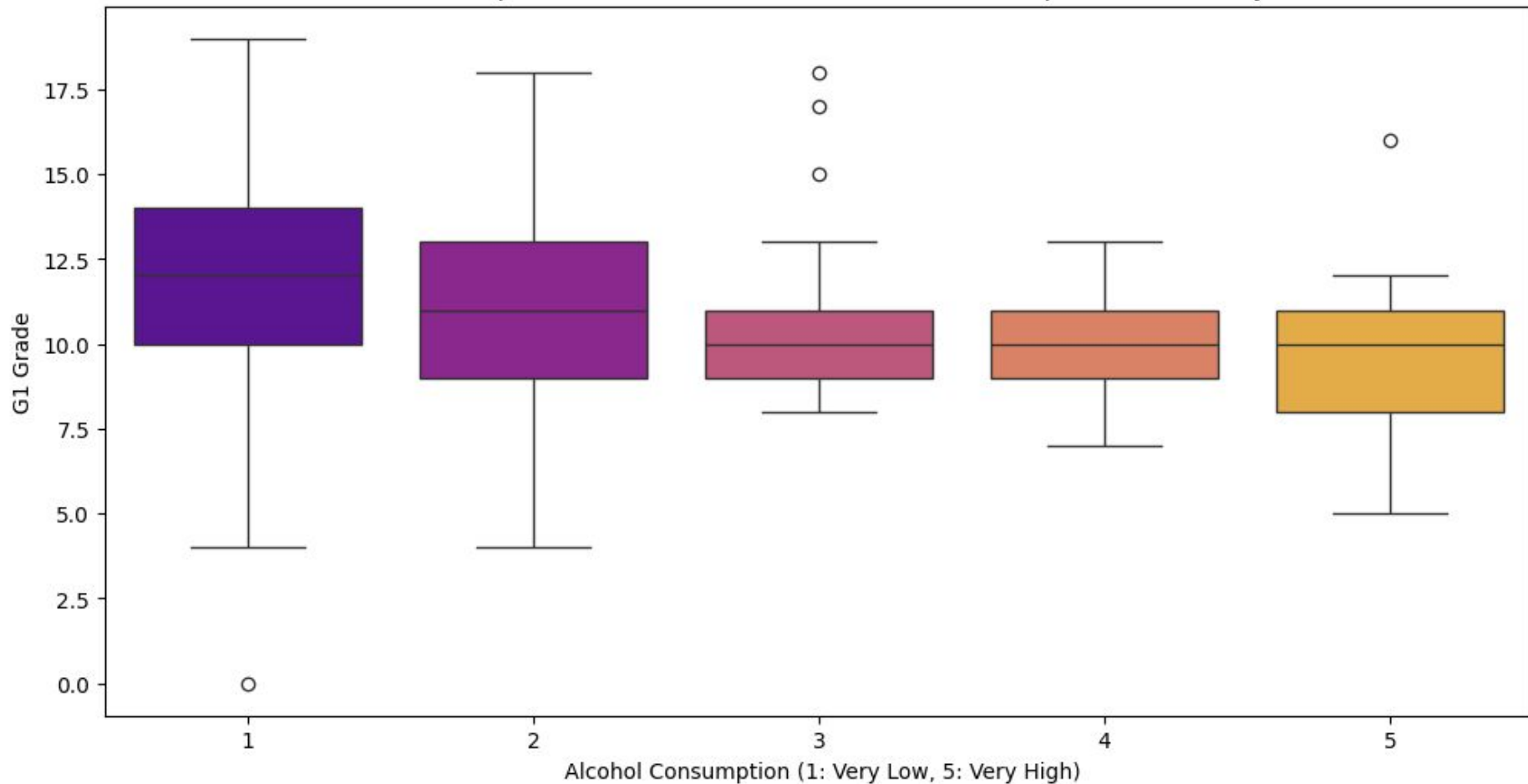
Alcohol consumption on the weekend (categorical: from 1 - very low to 5 - very high)
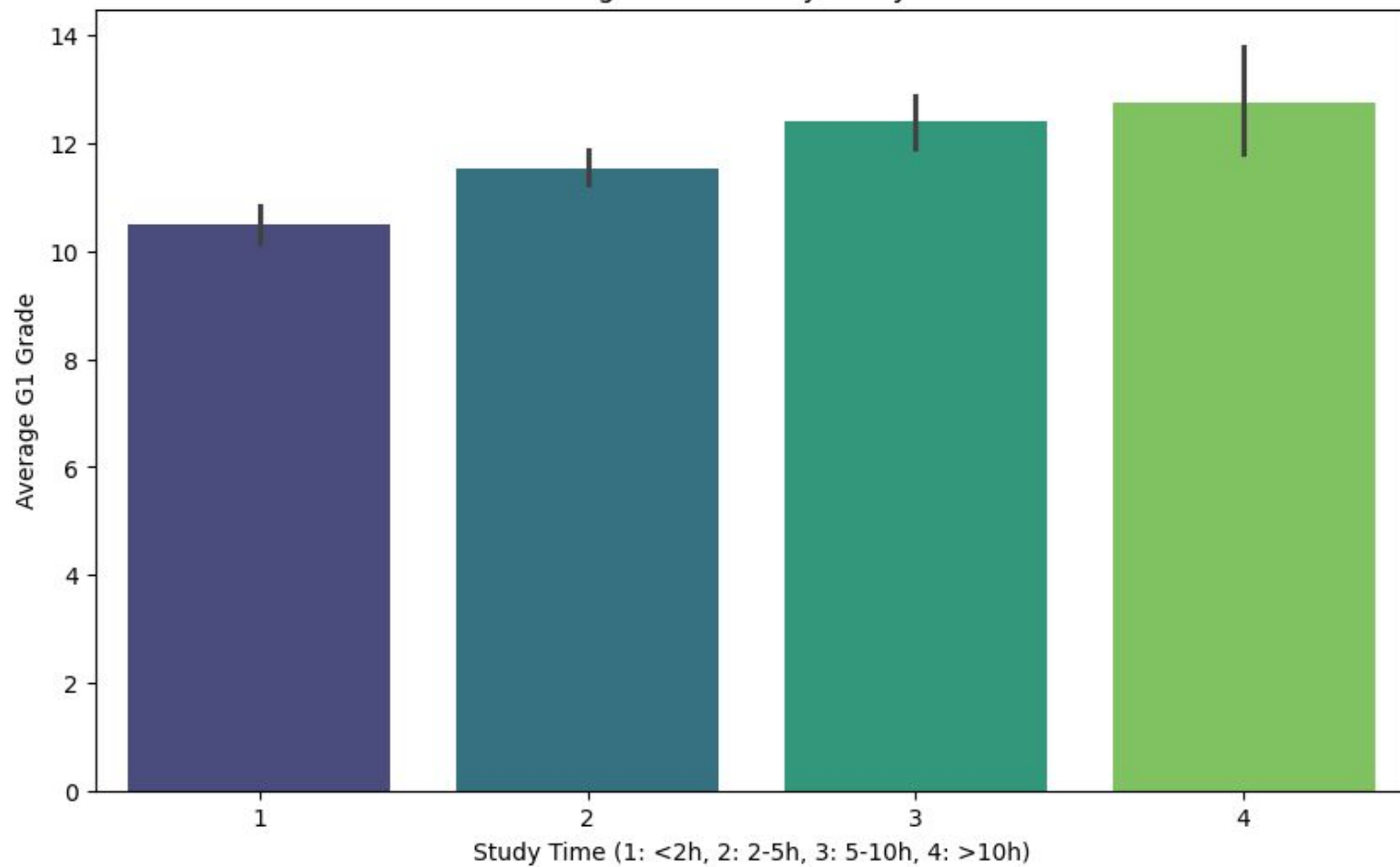
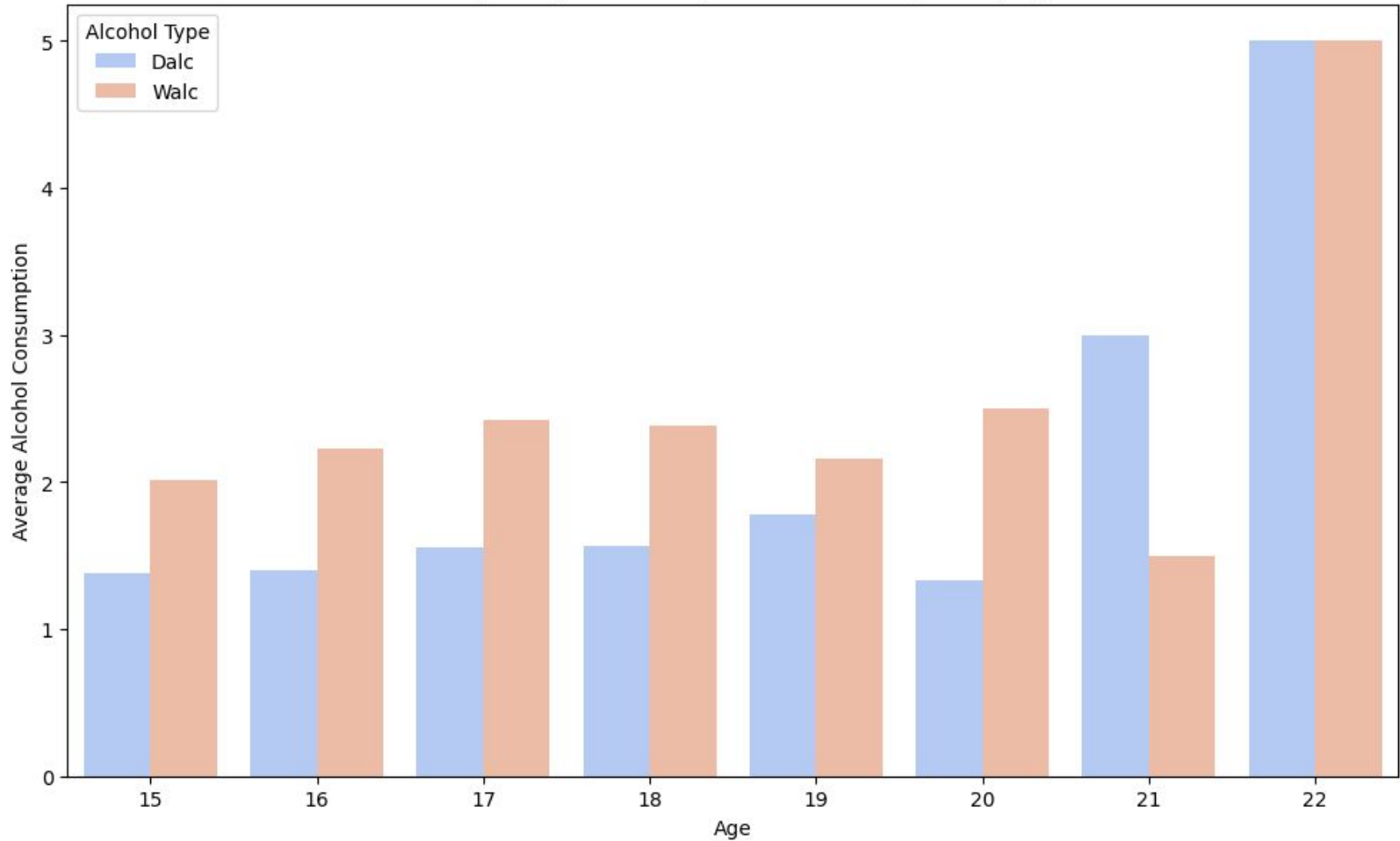Relationship between G1 Grades and Alcohol Consumption on Weekends

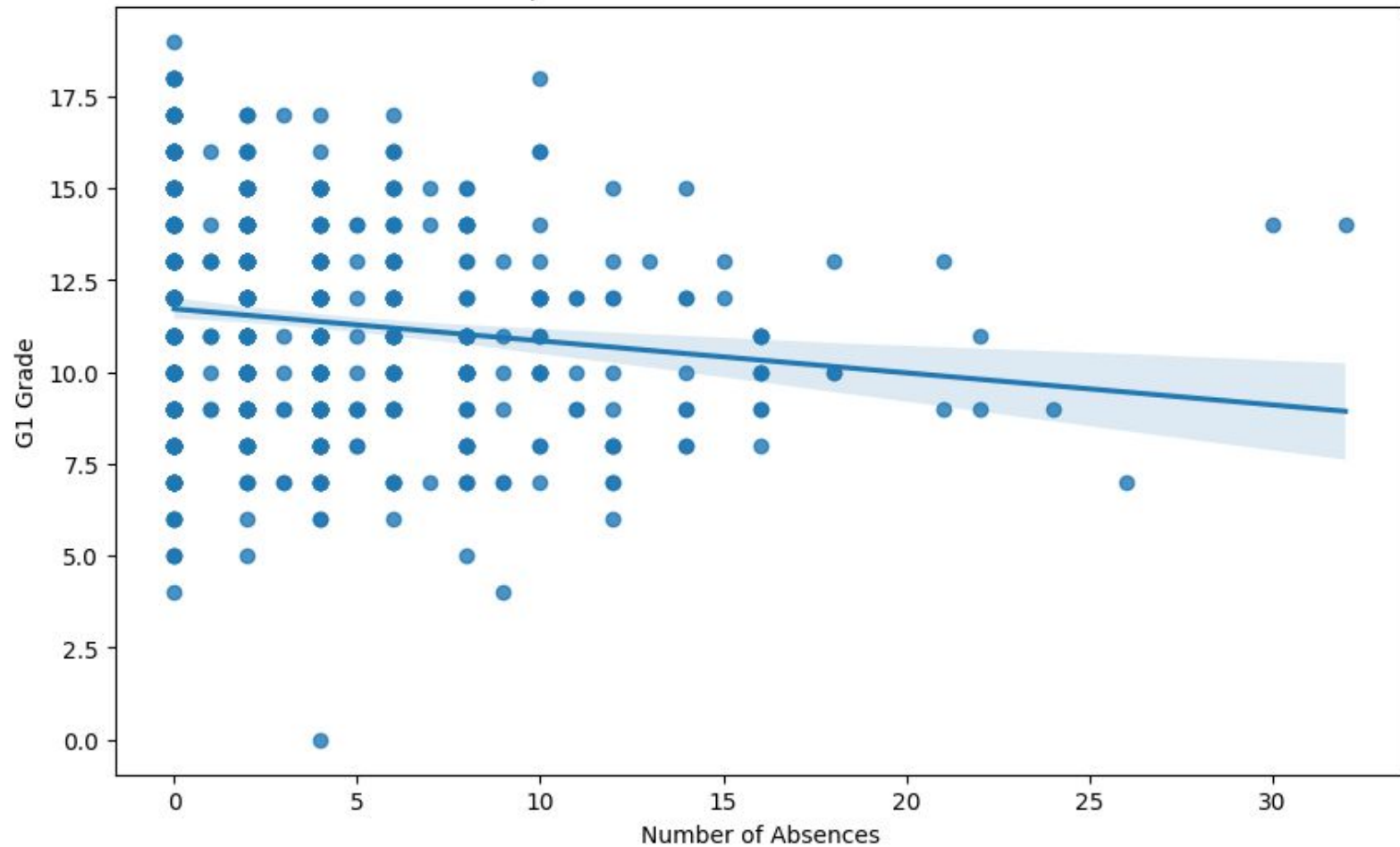Average G1 Grade by Average Parental Education Level
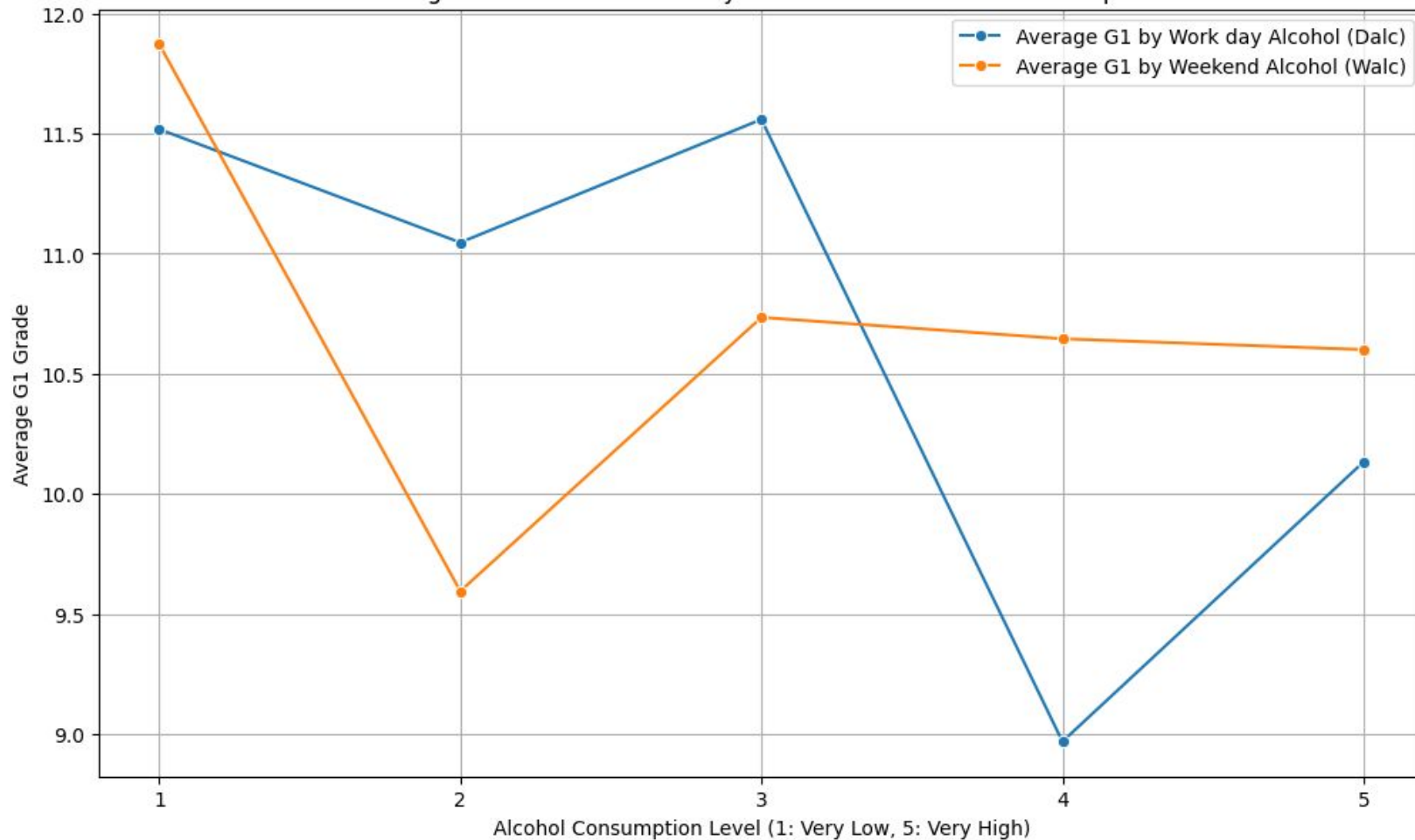
Average G1 Grade by Study Time

Weekday and Weekend Comparison

Relationship between Absences and G1 with Trend Line

Average G1 Grade vs. Work day and Weekend Alcohol Consumption

Comparison of the influence of Work day Alcohol consumption and Weekend alcohol consumption

Insights recap

- **Alcohol Consumption and Grades:** Both daily (Dalc) and weekend (Walc) alcohol consumption appear to have some relationship with G1 grades. The box plots suggest that as alcohol consumption levels increase, the median G1 grade might tend to decrease, although this trend might not be strictly linear or strong.

- **Parental Education and Grades:** There appears to be a positive correlation between the average parental education level and the G1 grade. The bar chart suggests that students with higher average parental education levels tend to have higher average G1 grades.

- **Study Time and Grades:** The bar chart indicates a positive trend between study time and G1 grades. Students who report spending more time studying generally have higher average G1 grades.

- **Absences and Grades:** The scatter plot with the trend line suggests a potential negative relationship between the number of absences and G1 grades. As the number of absences increases, the G1 grade might tend to decrease, although the trend line shows the general tendency and individual data points may vary.

- **Age and Alcohol Consumption:** The bar chart showing average daily and weekly alcohol consumption by age provides insights into how alcohol consumption patterns might differ across age groups in this dataset.

Thank you for your attention!