



Descriptive Statistics

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Problem Statement:

Student Performance Data is obtained in a survey of students' math courses in secondary school. Apply descriptive statistics on the given dataset to calculate, describe and summarize data in a logical and efficient way.

Dataset Description -

Student performance dataset contains 33 attributes with 395 records.

Attributes	Description
school	student's school
sex	student's sex
age	student's age
address	student's home address type
famsize	family size
Pstatus	parent's cohabitation status
Medu	mother's education
Fedu	father's education
Mjob	mother's job
Fjob	father's job
reason	reason to choose school
guardian	student's guardian
traveltime	home to school travel time
studytime	weekly study time
failures	number of past class failures
schoolsup	extra educational support
famsup	family educational support
paid	extra paid classes within the course subject
activities	extra-curricular activities

nursery	attended nursery school
higher	wants to take higher education
internet	Internet access at home
romantic	with a romantic relationship
famrel	quality of family relationships
freetime	free time after school
goout	going out with friends
Dalc	workday alcohol consumption
Walc	weekend alcohol consumption
health	current health status
absences	number of school absences
G1	first period grade
G2	second period grade
G3	final grade

- 1) What is the average age of the student ?
- 2) Calculate the maximum first period grade.
- 3) What is the median for a mother's education?
- 4) Calculate the minimum number of school absences.
- 5) Calculate the mode for mother's job.
- 6) Plot the histogram to count the reason to choose school.
- 7) Plot the boxplot for the final grade.
- 8) Calculate the Interquartile range for the number of school absences.
- 9) Calculate variance for age, traveltime, studytime and failures.

- 10) Calculate the count of going out with friends.
- 11) Compute Standard deviation for family relationships.
- 12) Check the skewness and kurtosis of alcohol consumption on weekends.
- 13) Plot the density plot for workday alcohol consumption.