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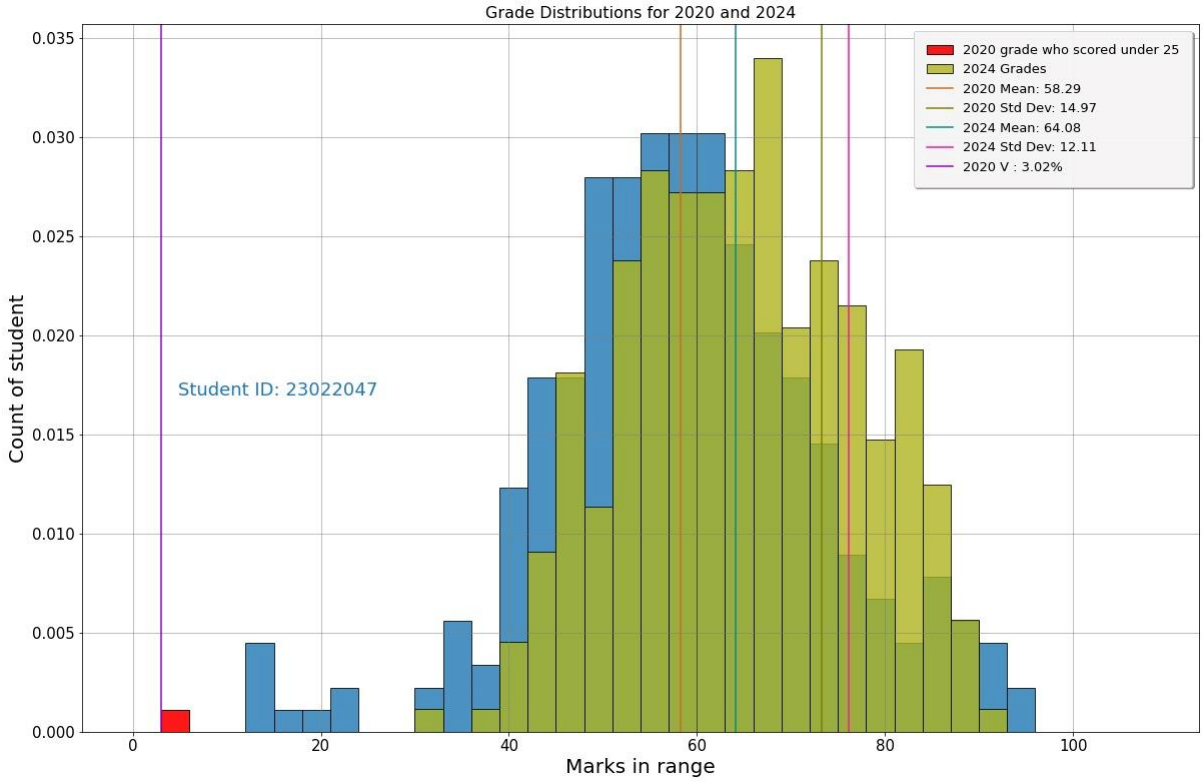

Dataset Overview

The 2020input7.csv dataset contains exam grades of 2020. The dataset consists of three columns, the first two columns denote mark ranges from the minimum to the maximum mark of equal intervals, while the third column indicates the count of students in each mark range. Meanwhile 2024input7.csv dataset contains exam grades of 2024.The dataset 2024input7.csv dataset consists of one column of grades of all students with no particular range as given to previous dataset.

Brief description of values

Mean value of 2020 grades is 58.29,Standard deviation of 2020 grades is 14.97 Mean value of 2024 grades is 64.08,Standard deviation of 2024 is 12.11 and V_value of 2020 is 0.28

V value explanation

v value is calculated by dividing number of students by who scored under 25 by total number of students , shaded red histogram is calculated by multiplying it by 100.

Interpretation of grade distribution

In this image, there are two overlapping histograms: one representing the grades from 2020 and the other from 2024. The purple histogram shows the 2020 grade distribution, while the light green represents the 2024 grade distribution. The dark green area indicates the intersection of both 2020 and 2024 histograms, where the red portion signifies the grades of 2020 students who scored under 25. From these histograms, we can conclude that, on average, students scored better in 2024 than in 2020. To be precise, students in 2024 performed 5.79 points better on average than students in 2020. The standard deviation of 2024 is lower compared to that of 2020, indicating that the variance of 2020 is greater than that of 2024. The V value of 2020 represents the proportion of students who scored under 25 relative to the entire student population.

Formula

Mean of 2020:μ=$\sum f\bar{x}$/n

Mean of 2024:μ=$\sum$x/N

Standard Deviation of 2020:σ=(($\sum f(\bar{x}$- μ)^2)/(n-1))^(1/2)

Standard Deviation of 2024:σ=(($\sum$(x- μ)^2)/N))^(1/2)