



جامعة مصر للمعلوماتية  
EGYPT UNIVERSITY  
OF INFORMATICS

Egypt University of Informatics  
Computer and Information Systems  
Data Analysis Course

# The Analysis of the Performance of Data Analysis Students

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## Introduction

Most of recent Secondary schools graduated students assume that your grades depend on how you attend your classes (online | on-ground) is that true?

## Research Question

How do you attend your classes?

## Hypothesis

Your Exam grades depend on how you attend your classes.

## Population of Interest:

EUI students

## Sampling Method:

Random sampling

## Bias Identification:

In designing this survey, we have taken steps to identify and minimize potential sources of bias. There was a bias of selecting our population of interest EUI students as EUI is a university specialized in Tech field there was potential bias that most students have fair knowledge in using digital stuff, so they already favour attending online classes, so we had to choose random sampling to solve this problem.

## Survey Questions:

1-Gender

2-What is your CGPA?

3-What is your Secondary education certificate?

4-What is your total grades according to Egyptian Thanaweya Amma grading system?

5-Optional: specify your total grades if you are not a Thanaweya Amma certificate holder as written in your certificate

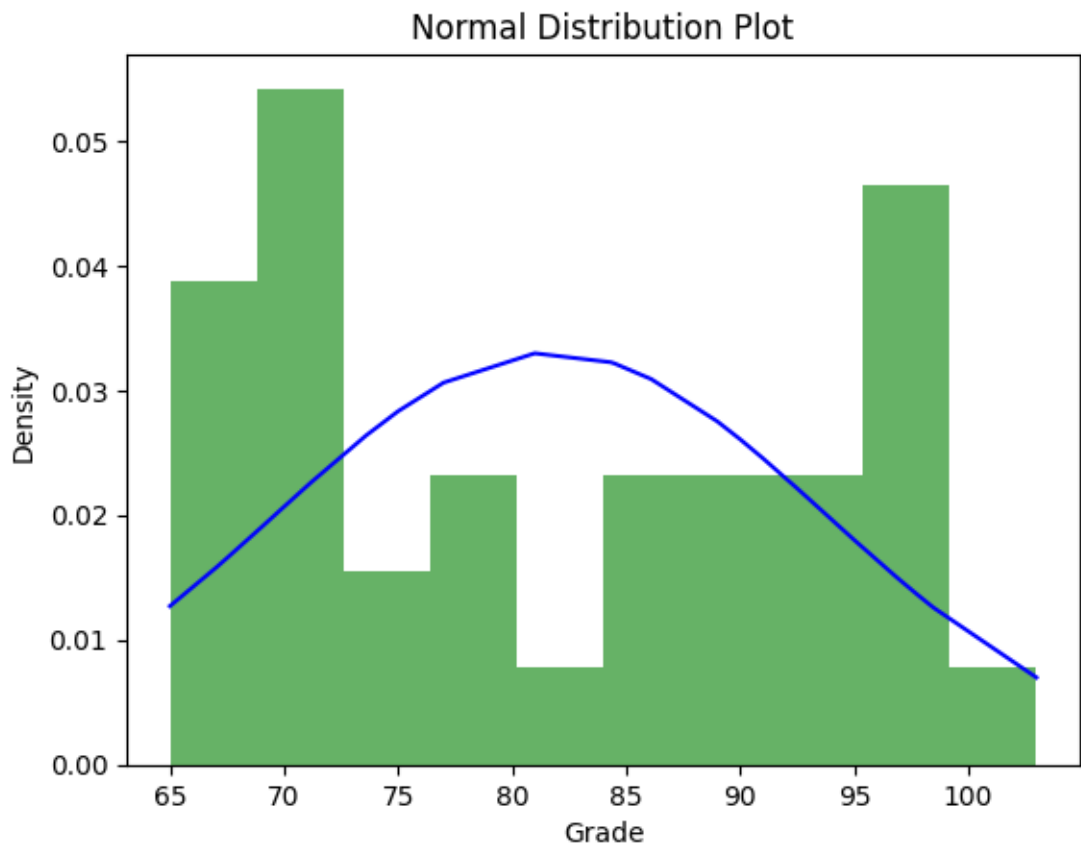
6-How did you attend your private courses through senior year (Online | On-ground) ?

7-If there a chance to improve your previous grades what would you choose (Online | On-ground)?

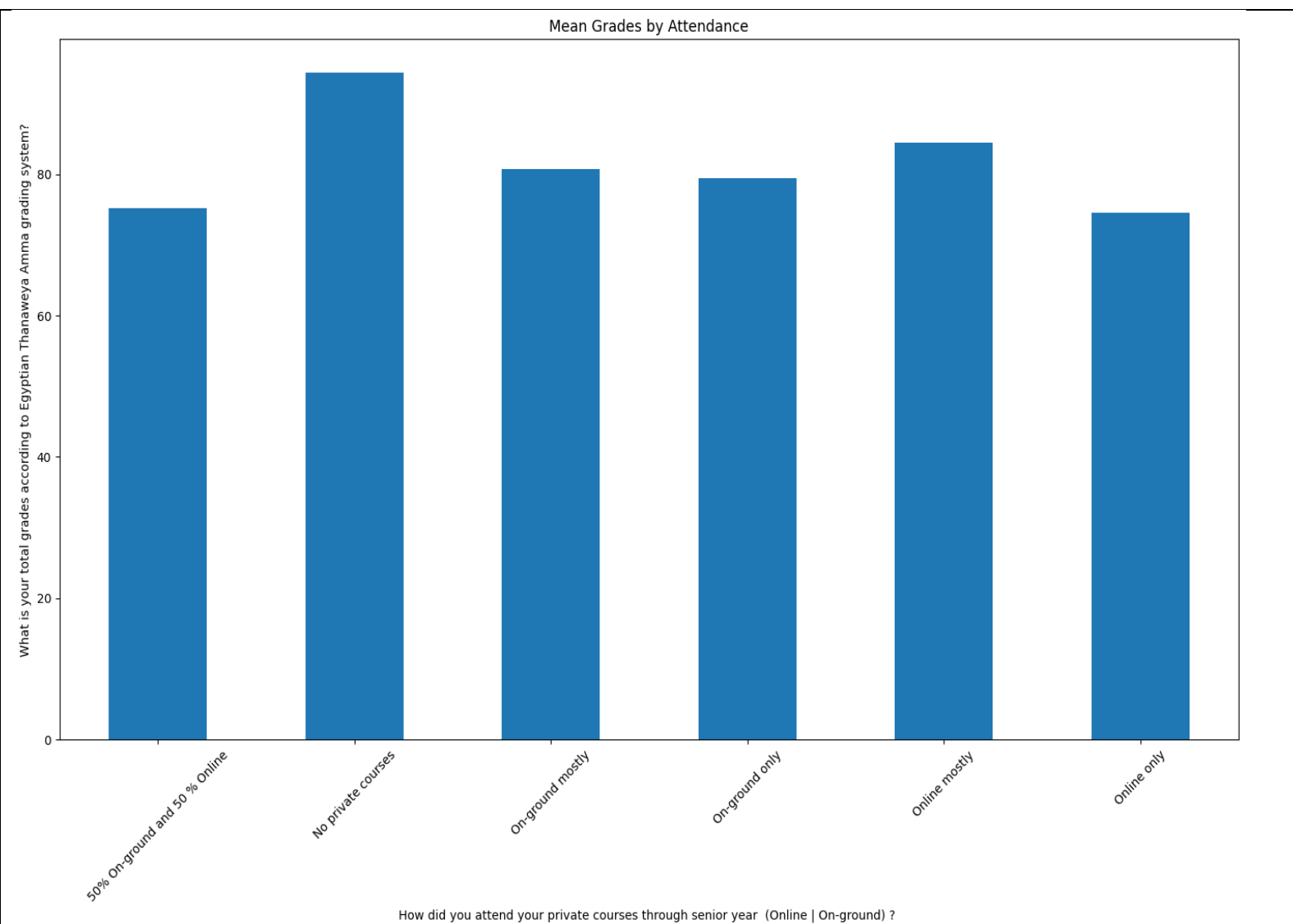
Online survey link: <https://forms.gle/WrxxNByCyzrsBQB1A>

Number of samples collected: 34

Analysis:



The histogram and the normal distribution curve appear to follow a roughly symmetric bell-shaped curve. This suggests that the distribution of grades follows a normal distribution pattern. In this graph the data is distributed normally with mean 81.7% and standard deviation 77.0. The distribution of grades appears to be centered around the mean with most grades falling within a certain range around the mean. There are a few grades that are relatively far from the mean, as evidenced by the tails of the distribution. These may represent outliers or unusual data points that deviate significantly from the typical grade distribution.

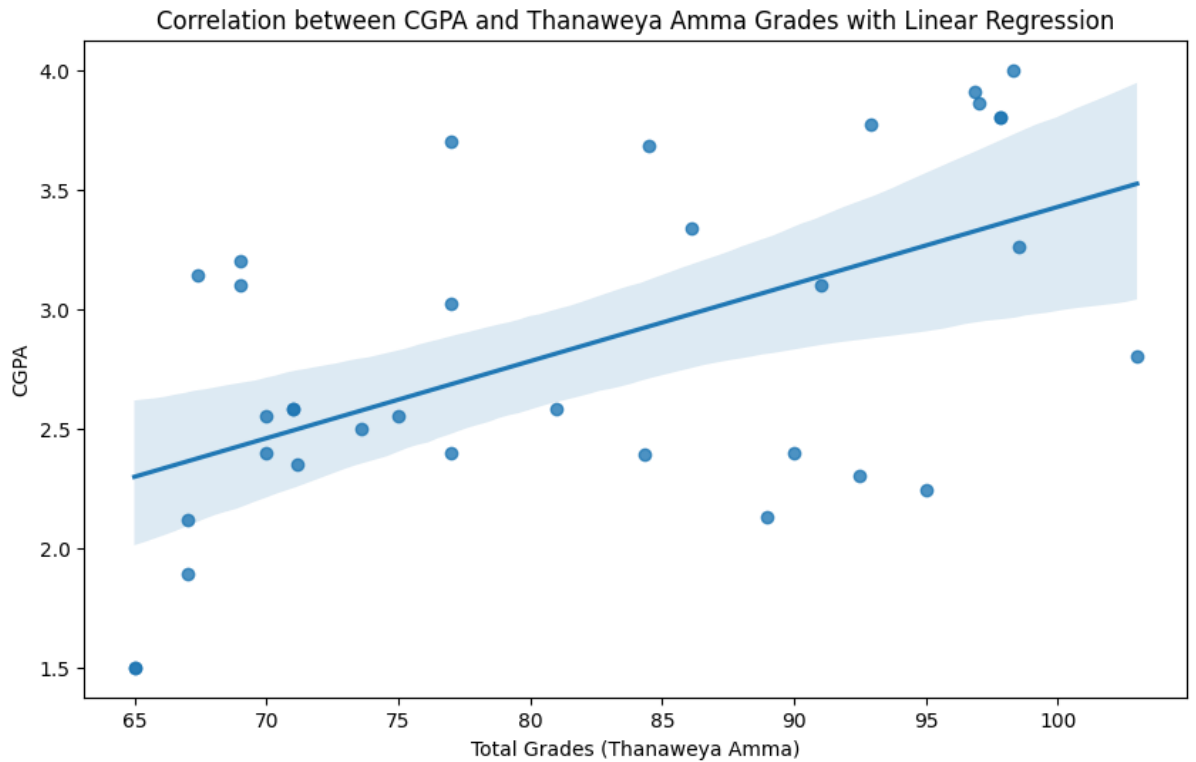


### 1. Interpretation:

- Students who attended private courses mostly or entirely online tend to have higher mean grades compared to those who attended mostly or entirely on-ground.
- Students who had a mix of online and on-ground attendance have varying mean grades, depending on the proportion of each mode.
- The mean grades are generally higher for students who attended courses online, suggesting that online learning might have been more effective or conducive to their academic performance compared to on-ground learning.

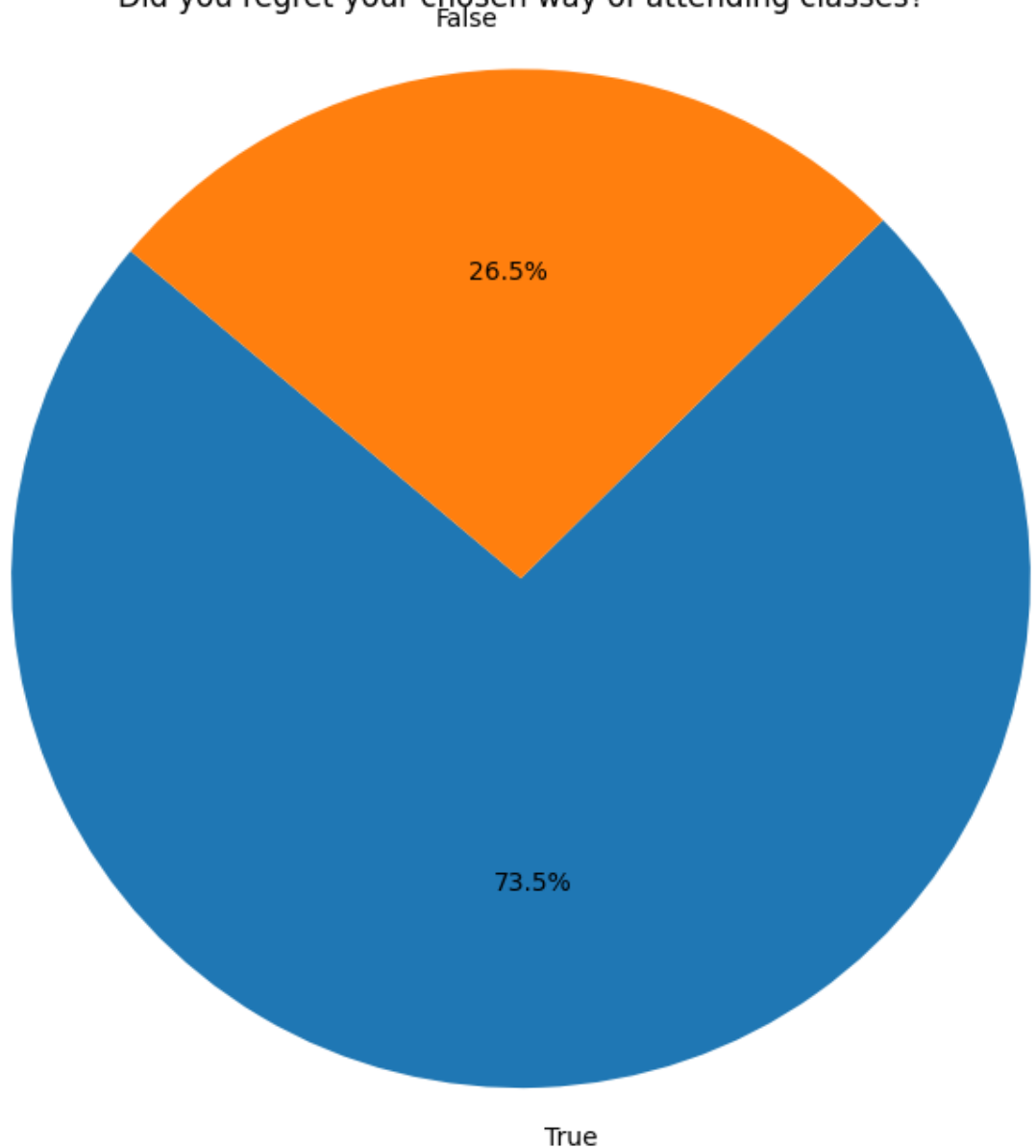
### 2. Considerations:

- Other factors beyond attendance mode could influence grades, such as individual study habits, teacher quality, resources available, etc. Further analysis or controlled studies may be needed to isolate the impact of attendance mode on grades accurately.



The regression line has a positive slope, it indicates a positive correlation between CGPA and Thanaweya Amma grades. This suggests that higher Thanaweya Amma grades are associated with higher CGPA values. By observing the direction and slope of the linear regression line in the plot, you can deduce the nature and strength of the correlation between CGPA and grades according to the Egyptian Thanaweya Amma grading system in your dataset.

Did you regret your chosen way of attending classes?



This chart shows that 73.5% of students regret their chosen way for attending classes or tend to choose another way of attending classes.

## Conclusion

From the previous data visualization and linear regression, we can deduce that there is no relation between selecting specific way to attend your classes and achieving higher grades this obvious from the normal distribution graph that the grades of the students makes a bell shape. Also, from the linear regression graph we can deduce that there is a positive relation between having higher grades in high school and achieving higher CGPA. Finally, when asked the students hypothetical question to see if they regret their decisions (online| on-ground) most of them regret their choice while we deduced that student grades only depends on their study habits or their IQ.

### Any potential issues

I think we need more participation in the survey. I tried to gather more participants from many groups related to Thanaweya Amma but I didn't get any responses.