

Reflection for PSDA Project:

Based on the data analysis conducted on students' performance, I have gained significant insights and valuable experiences. Selecting a suitable dataset was a crucial first step, requiring careful consideration to ensure its relevance and comprehensiveness. This process underscored the importance of data selection and its impact on the overall analysis. Identifying variables and determining their data types initially posed a challenge, but through frequent discussions and valuable guidance from our lecturer, Dr. Sharin Hazlin Huspi, we managed to overcome these obstacles. This collaborative effort not only enhanced our problem-solving skills but also strengthened our team dynamics. Working hands-on with the dataset to explore and investigate the relationships between variables was both fascinating and enlightening. It provided me with a new perspective on data analysis and allowed me to apply theoretical concepts to practical scenarios. This project has deepened my understanding of topics covered in class, making it a valuable revision exercise that enhanced my comprehension of various statistical tests.

Through this project, I also improved my proficiency in R programming, recognizing it as a powerful tool for statistical calculations. The hypothesis testing revealed that the mean GPA for both genders does not vary significantly, while the correlation test showed a linear relationship between study time weekly and GPA. This relationship was further examined through regression analysis, providing a clearer picture of how study time impacts GPA and enabling GPA predictions based on study time. The ANOVA test, despite being a one-way test with unequal sample sizes, concluded that the mean GPA is consistent across different age groups. These findings highlight that increasing study time is key to better performance, while gender and age have minimal impact. Additionally, the project reinforced my understanding of statistical concepts and tests, such as hypothesis testing, correlation, regression, and ANOVA. I am grateful for Dr. Sharin's unconditional support, guidance, and valuable feedback throughout the project, which greatly contributed to our success. This experience has provided me with a strong foundation in both data analysis and teamwork, which will undoubtedly benefit me in future endeavors.