



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

PROBABILITY AND STATISTICAL DATA ANALYSIS

SECI2143

SECTION: 09

SUBMITTED TO:

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REFLECTION ON PROJECT 2

Title: Information about stuff of an Institution

The purpose of the Project:

This project was based on the staff of a university faculty. In this estimation, the staff has different faculty positions such as Tutor, Lecturer, Senior Lecturer, Associate Professor, Professor.

- ❖ This study aims to know the basic information of staff to avoid data failings in the time of emergency accidents or to ensure the basic health requirements by knowing their health issues based on weight, blood group, and height.
- ❖ Besides, this study also aims to observe and study the relationships between house sales price value and other variables.

Methodology:

In this project, the subjects we targeted were the blood groups, height, weight, and most importantly the qualifications of the staff.

- ❖ Dataset that was used in this project is obtained from Kaggle website, IAAF official website, official Berlin Marathon website.
- ❖ Population of dataset was more than thousands and near to one thousand forty.
- ❖ 4 sets of sample data with sample size of 30 were randomly selected from the population.
- ❖ There was various variable according to position height, weight, blood group and qualifications.
- ❖ 4 variables were used in the project.

STATISTICAL TEST:

- ❖ Hypothesis Testing for 2 samples
- ❖ Correlation Analysis
- ❖ Regression Analysis.
- ❖ Chi Square Test of Independence.

We carried out a 2-sample hypothesis test. On the other hand, we also carried out a correlation test on height and weight and regression analysis.

In this project, the test calculations and important scatter plot graphs were assisted by the RStudio programming language.

Interesting findings from results:

From our calculations and data analyses in 2-sample hypothesis testing, we have discovered that the average percentage of a University's staff who holds a Ph.D. is 64%. From the correlation test, we had come up with the relation between weight and height of the staff. And the result was quite surprising that it has no relation between both. All these findings were interesting in this study meanwhile doing this project.

Conclusion:

We have learned many new things from all the activities done in project 2. Especially things such as having to select a group of data and be able to state results based on calculations performed on the dataset. We were exposed to the practical way of carrying out various statistical tests on our favourite topic and applying the knowledge of inferential statistics. We also got to learn the basics of the R Programming language which was new for all of us. In the meantime, some team working skills and communication skills were also gained. It was a blessing that we also got enough support from our lecturer.

Video Presentation link:

https://drive.google.com/drive/u/0/folders/1eqhb_wyJV0ZpNY4d2fXOjQrg5qloYYP