Statistics - Assignment 3

The first thought of the Final Team Project

This semester, you've learned about applying statistics to make conclusions from data. Now, it's time to apply statistics to your question. In the final team project, please raise a question, collect data related to the question, perform statistics analysis and test, and finally make a conclusion based on the results. **The assignment 3 is the proposal for the final team project.** Please propose a final project plan with your group members (at most 4 people in a group). 這學期你們學了如何應用統計學分析資料並下結論，在這門課的期末專題中，你們必須提出問題、搜集資料，並且應用所學在你有興趣的資料中，最後回答你提出的問題。作業3是請你們提出期末專案的規劃，也是分組作業，請跟組員(至多4人)一起完成。

Sign up your team member here before 2024/5/2 (Thr.) 23:59. 請在5/2結束前填寫分組名單。

Please submit a document in either Mandarin or English to the E3 system (1 submission per group) by 2024/05/09 23:59, the contents should include the following:

1. Motivations & your questions
2. The plan for data collection
3. The data analysis methods that you want to apply
4. Expected results and conclusions

The scoring criteria, as a group (Will be graded on completeness and clarity by the instructor&TAs 60%, and your peers 40%):

1. Motivations & your questions (10%)
    a. Completely introduce the background (including motivation) of this project
    b. The motivations and questions are linked
2. Data collection (40%)
    a. The plan of the data collection process and contents (including data types, definition, and others) are clearly described
    b. The data they plan to collect or download can answer are related to the question
    c. They plan to collect a reasonable amount of data to answer the question
    d. Potential biases are considered and described
3. Analysis methods (30%)
    a. Plan to use the correct way to perform descriptive analysis
    b. The hypotheses are related to their questions
    c. Appropriate statistical tests are planned to be used to test your hypotheses

4. Expected results (10%)
    a. The expected results and conclusions that you are planning to make are related to the data and test you plan to perform
5. Creativity and others (10%)

Some examples for the final project:
1. Do students from different departments have different preferences for restaurants in NYCU? For what reasons?
    You can distribute surveys on the Internet to collect the data.
2. Does NYCU have higher dropout rates than NTHU and NTU? Are there any differences in the reasons for dropout?
    You can find the data on the Internet (Open data from the [government](#) and others)
3. Is it true that students majoring in CS have higher pay? What is the trend in 10 years?
    You can find the data on the Internet (Open data from the [government](#) and others, such as job discussion boards)
4. … Anything you are interested in can be the topic!