**Mini Project 1:**

**Objective:**Identify a solution to a business problem that interest you

**Project Prompts:**

* 1. **Scope** the problem
     1. What is the problem? (**Problem Scoping**)
     2. Who is affected by it and how? (**Stakeholder**)
     3. What is the value in solving the problem? Why solving the problem matters? (**Value Proposition**)
  2. **Source** relevant dataset from [kaggle.com/datasets](http://kaggle.com/datasets)
  3. **Using** materials (slides & labs) from **Module 1 and/or 2. Module 3 is optional.**
     1. **Module 1:** 
        + **Part A:** Python for Data Science
        + **Part B:** Mathematics and Statistics
     2. **Module 2:** 
        + **Part A:** EDA (e.g. boxplots, etc)
        + **Part B:** Data Science Practices (e.g. Hypothesis testing)
     3. **Module 3 (optional):** 
        + **Part A:** SQL and Databases
        + Optional: to answer any business queries along side with an API to summarise the answer from the database.
        + **Part B:** APIs
        + Handy feature to use external data from public internet
  4. **Apply** the data analysis process to derive insights and findings.
     1. **Understand** the data.
     2. **Choose** the part of the **data relevant** to the problem statement.
     3. **Clean the data** in event of missing values and/or duplicate records.
  5. **Present** data-driven insights using data visualizations.
     1. **Identify most suitable charts** (i.e. bar, table, line, etc) to represent these insights in the optimal way.
  6. **Make** business **recommendations** based on your findings.
     1. **Suggest areas of improvements** in the business based on the insights delivered.
     2. **Show awareness of the limitation** of the data and suggest what additional data is required for a better analysis.
     3. **State the assumptions** you made in your recommendations.
* **Project Deliverables:**
  1. **Jupyter Notebook** (For analysis in step d. and e.)
  2. **Slides** (For presentation of step a-f)

**Due Date: 2359**hours of **12th Sep 25** (Friday)

* **Presentation Format:**
  1. 1 person per project
  2. Business value pitch using slides (5mins)
  3. Code review of jupyter notebook (2mins)
  4. Feedback from the teaching team & classmates (3mins)
* **Presentation Date:** **0900** hours of **13th Sep 25** (Saturday of Week 10)

If you have any project related questions, reply in the thread.

Meantime, attached is a sample project for your reference.

**Preparation Idea:**

1. Review the past student slides and design a template for the presentation
2. Define or identify what business problem or idea that interest you and is this impactful or useful to perform the analysis?
3. Get a dataset and brainstorm how to conduct the analysis