# Data Modeling Assignments

You can share your work by uploading jupyter notebooks to a github repoand sharing a pull request for each assignment.

#### **Grading Criteria:**

- 1. Use of libraries
- 2. Execution
- 3. Selection of visualization plots
- 4. Comments
- 5. Insights and Inferences derived

#### **Bonus Points For:**

- 1. Going the extra mile to ask more questions related to the dataset
- 2. Going the extra mile to answer those questions using the existing dataset or bringing in another dataset
- 3. Following good software engineering practices

## Assignment DM1- Scraping Websites

Scrap the wikipedia pages of your top 5 favourite movies, and scrape the following

- 1. The movie name
- 2. Director
- 3. Year of release
- 4. Overall gross earning
- 5. The cast

### Assignment DM2 - Merging Dataset

We have provided you with a dataset that has a compiled list of car accidents. <a href="https://drive.google.com/drive/u/0/folders/1AISQxIXnAKMImYwpwVTs6FMMKz44mB4C">https://drive.google.com/drive/u/0/folders/1AISQxIXnAKMImYwpwVTs6FMMKz44mB4C</a>

#### Your task is to

- 1. Merge the datasets
- 2. Conduct exploratory data analysis to identify
  - a. Which city had the most amount of accidents
  - b. Identify if there was any time of the year or day that had more reported accidents? Try to infer why.
  - c. There are several other factors indicated in the dataset- weather condition, latitude-longitude, sunrise\_sunset etc. Pick any one factor and predict what effect it might have had on the number of accidents. Confirm with a visualization. Were you right or wrong?

### Assignment 3 - Finding Datasets

Pick your own dataset from one of the following domains (You can merge more than 1 data set for bonus points.)

- 1. Healthcare
- 2. Retail purchases
- 3. Sports

Come up with min 5 questions you want your data to answer and use visualizations to answer the same.