

## Datasets

There are 4 datasets available for you to do your assignment on. Each dataset has a set of required analysis functions. Remember, in addition to the listed required analysis tools, you must come up with 1 additional analysis task/tool of your own.

### Victoria State Accident DataSet

<https://www.kaggle.com/gaurav896/victoria-state-accident-dataset>

#### Required Features:

- For a user-selected period, display the information of all accidents that happened in the period.
- For a user-selected period, produce a chart to show the number of accidents in each hour of the day (on average).
- For a user-selected period, retrieve all accidents caused by an accident type that contains a keyword (user entered), e.g. collision, pedestrian.
- Allow the user to analyze the impact of alcohol in accidents – ie: trends over time, accident types involving alcohol, etc.
- One other 'insight' or analysis tool of your choice

### Sydney Airbnb Data:

<https://www.kaggle.com/tylerx/sydney-airbnb-open-data>

#### Required Features:

- For a user-selected period, report the information of all listings in a specified suburb
- For a user-selected period, produce a chart to show the distribution of prices of properties
- For a user-selected period, retrieve all records that contain a keyword (user entered), e.g. pool, pet.

- Analysing how many customers commented on factors related to cleanliness (multiple key words may be associated with cleanliness – justify your selection).
- One other 'insight' or analysis tool of your choice

## **NSW Traffic Penalty Data:**

<https://www.kaggle.com/lilian/australia-nsw-traffic-penalty-data-20112017>

### **Required Features:**

- For a user-selected period, report the information of all penalty cases.
- For a user-selected period, produce a chart to show the distribution of cases in each offense code
- For a user-selected period, retrieve all cases captured by radar or camera based on offense description
- Analysing the cases caused by mobile phone usage - ie: trend over time, offense code, and so on.
- One other 'insight' or analysis tool of your choice

## **New York Restaurant Inspection results:**

<https://www.kaggle.com/datasets/new-york-city/nyc-inspections>

### **Required Features:**

- For a user-selected period, retrieve relevant inspection details.
- For a user-selected period, plot the distribution of violations over the different suburbs
- For a user-selected period, retrieve all violations that contain a keyword (user entered).
- Analyse the cases related to animals, e.g., rats, mice or others, and their trend over time and distribution over suburbs
- One other 'insight' or analysis tool of your choice