Lab Exercise Demonstration 2

COS30045 DATA VISUALIZATION

MOHAMED USAIDH ABDUL RAZZAQ

105017157@student.swin.edu.au

**Hosting**

<http://105017157.infinityfreeapp.com/index.html>

**GitHub**

https://github.com/Chakablaster/Main/tree/main/Lab

**Lab 3**

**Lab 3.1**

**A screenshot of a computer game

Description automatically generated**

**Lab 3.2**

**A screenshot of a computer

Description automatically generated**

**Lab 4**

**Lab 4.1**

**1. How do road fatalities vary by location (state or region)?**

* **Data attributes needed:**
  + Column: "State" or "Region"
  + Column: "Number of fatalities"
* **Data transformation:**
  + Summarise the total number of fatalities by location.
  + No significant data type changes are needed, just an aggregation of fatalities for each location.
* **Visualisation sketch:**
  + A **choropleth map** or **bar chart** that shows the number of fatalities per state or region. The map could colour-code the severity, and the bar chart would list states in descending order of fatalities.

A graph with blue and white bars

Description automatically generated

**2. What time of day sees the most road fatalities?**

* **Data attributes needed:**
  + Column: "Time of crash"
  + Column: "Number of fatalities"
* **Data transformation:**
  + Group the time of crashes into intervals (e.g., hourly or morning/afternoon/evening).
  + Transform the time data into categories like "morning," "afternoon," "evening" for easier visualisation.
* **Visualisation sketch:**
  + A **line graph** or **histogram** showing fatalities on the Y-axis and time intervals on the X-axis, illustrating peak times for crashes.

A graph with a line going up

Description automatically generated

**3. What types of crashes lead to the highest number of fatalities?**

* **Data attributes needed:**
  + Column: "Crash type"
  + Column: "Number of fatalities"
* **Data transformation:**
  + Aggregate the number of fatalities per crash type.
  + No transformation is needed for this data.
* **Visualisation sketch:**
  + A **pie chart** or **bar chart** showing the proportion or number of fatalities by crash type, highlighting the most dangerous crash scenarios.

