School of Science, Computing and Engineering Technologies

COS30045

LAB 4.1 Design Studio

Overview

In this lab you will be given a sample data set and asked to identify the different data and attribute types. You will also think about some questions about this data set that might be answered by a visualisation.

ardd\_fatalities\_Jan2020\_0.xlsx (download from Canvas)

Download and review this data set before attempting this exercise.

1 Interpreting the data set

Complete the LAB 4.1 Quiz.

2 Visualisation Design

Think of three questions you would like to answer with that require a data visualistion.

For each data question you will need to consider the following:

Which data attributes (columns) do you need to answer this question?

Do you need to transform any of the data?

Does the data type change when you transform the data? If so how.

Make a sketch of how you think your visualisation might look and add to this document.

Your Question 1

**How do road fatalities vary across different times of the day?**

Which data attributes (columns) do you need to answer this question?

* Time of day
* Number of fatalitie
* Day of the week

Do you need to transform any of the data?

Group data by time interval

Does the data type change when you transform the data? If so how

Time data will be categorized into ranges.

Make a sketch of how you think your visualisation might look and add to this document.

Your Question 2

What is the distribution of road fatalities by age group across different states?

Which data attributes (columns) do you need to answer this question?

* Age Group
* State
* Number of fatalities.

Do you need to transform any of the data?

Group data by age categories  
Does the data type change when you transform the data? If so how.

No change  
Make a sketch of how you think your visualisation might look and add to this document.

Your Question 3

**Are certain regions more prone to road fatalities during holiday periods (Christmas, Easter)?**

Which data attributes (columns) do you need to answer this question?

* State
* Road type
* Christmas/Easter period.

Do you need to transform any of the data?

Holiday period, group by region

Does the data type change when you transform the data? If so how.

None  
Make a sketch of how you think your visualisation might look and add to this document.

Include this file as evidence for your Demonstration 2