SUPERVISOR/S: Jessica Turner
PROJECT TITLE: Investigating Commuter Data in the Bay of Plenty
FIELD: Computer Science or Software Engineering
DIVISION/SCHOOL: HECS - School of Computing and Mathematical Sciences
PROJECT LOCATION: Tauranga

PROJECT ABSTRACT:
Traffic congestion in the Bay of Plenty area is a well-known issue for commuters. Data from Priority One has identified that traffic flows have increased by 5.7% in Tauranga alone for the year between September 2017-2018. This is partially matched with a collective increase in both personal and commercial vehicle registrations in the area of approximately 5%. Traffic congestion adds to the financial and environmental cost of commuting with increased fuel consumption leading to increased air pollution.

This summer research project builds on a user study carried out in A trimester 2021 which collected anonymous commuter data. This data has the potential to paint a clear picture of the commuting behaviour of individuals on a day-to-day basis and demonstrate the potential changes in behaviour as a result of increased or decreased traffic congestion. In this project you will investigate ways in which to visualise this data and create a working prototype to illustrate the benefits of this type of system.

STUDENT SKILLS:
- Experience in data collection.
- Programming skills (any language).
- Would be useful to have some understanding of databases, but not required.
- Would be useful to have some understanding of data visualisation, but not required.
- Ability to work independently and adapt.

PROJECT TASKS:
- Familiarise yourself with the data and usability evaluation techniques.
- Gain an understanding of data visualisation.
- Investigate ways to visualise data.
- Design and create a working prototype.
- Build an application that illustrates the data visualisation.

EXPECTED OUTCOMES:
- Student’s Research Poster (as per clause 6 of the Scholarship regulations)
- Identification of useful data visualisation techniques for commuter data.
- Demonstration of those techniques using a prototype.
- An application created in reference to the prototyped design.