

DATA5002 25T3 Assignment 2 Proposal

Zhining Chen, Qingying Zhang

November 19, 2025

1 Datasets Overview

In this project, we want to analyze the monthly entries and exits of some major stations in Greater Sydney area. The dataset initially contains monthly entries and exits of stations in Sydney over The dataset will be cleaned and some other necessary variables such as facilities in every station, rent at surrounding areas.

2 What we plan to do

We plan to investigate the footfall of each station to provide an overview of how busy a station is. Some stations may have significantly more footfalls than others. This may catch government's attention on maintaining necessary facilities' function as well as public order. For some international students looking for a place to live that both cheap and has quick access to campus, or for government officers who try to investigate the need for station expansion or facilities installment, this report may be useful. We plan to develop a web page containing both interactive parts and static parts.

2.1 Target audiences

This gives our two target audiences:

1. Joe – The Aspiring Transport Analyst (21 years old) Joe is a 21-year-old junior government officer working in Sydney's Transport Analysis Department. Having recently joined the public sector, he's been assigned to help assess the current state of transportation across the city and prepare recommendations on how to improve commuter satisfaction. Joe comes from a background in media and communications, so the world of data analysis, visualization, and statistical modeling is still quite new to him. He's keen to understand how numbers can tell stories about how people move around the city — where congestion happens, which routes are most efficient, and which suburbs might need immediate attention. For Joe, a clear, intuitive dashboard would serve as both a learning tool and a decision-support system. He's looking for something that simplifies complex transport data, helping him quickly identify patterns, trends, and problem areas. Ultimately, Joe hopes to translate data-driven insights into actionable advice that can guide short-term policy decisions to make Sydney's public transport more efficient and user-friendly.



Figure 1: Joe the transport analyst

2. Harris – The Budget-Conscious International Student(23 years old) Harris is an international student about to begin his Master of Finance at the University of Sydney. He will arrive in Sydney in one month and is currently researching accommodation options. With a strong focus on saving money, Harris wants to avoid high rental costs and is looking for affordable housing options. At the same time, convenience matters to him — ideally, he wants to live near a train or metro station so he can travel to the USYD campus quickly and easily.

Harris is seeking a clear and practical report that helps him compare rental prices in suburbs close to train stations and understand the commute options available to reach the university. Ultimately, he wants to make an informed decision that balances cost, accessibility, and ease of travel.

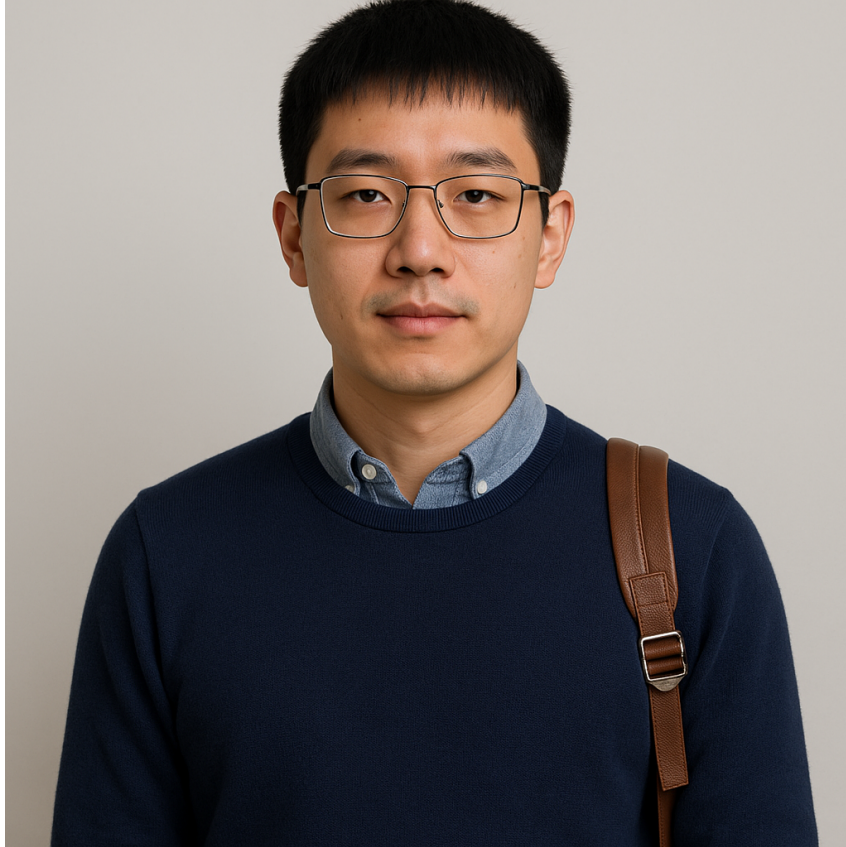


Figure 2: Harris the international student

We will not only try to investigate the overall most popular stations, but also try to find the stations that has continually increasing entries and exits. For international students, we will also provide some insights into the average rent. For government officers, we will provide some information about potential reason for some trends worth attention.

2.2 Hypothetical situation

Imagine transport usage data showing that Burwood Station experiences consistently high commuter volumes, particularly among young adults. This may indicate a substantial population of international students, such as Harris, who rely on rail services for travel to the University of Sydney.

For a transport analyst like Joe, this suggests the need to consider targeted improvements, including additional peak-time services, clear multilingual signage, and enhanced station accessibility. Such adjustments would help new international students navigate the transport network more effectively. This example demonstrates how integrating usage data with demographic insights can support more inclusive and evidence-based transport planning.

3 Similar work

We are inspired by the following materials WHO COVID-19 Dashboard, Shiny.paho dashboard1, Shiny.paho dashboard2, ITF dashboard, NSW Rent and sales report - interactive dashboard NSW Customer Satisfaction Index dashboard

4 Acknowledgement

I appreciate on those organisations or individuals that share their dashboards, webpages or reports to public for reference. Also thanks ChatGPT for helping me to build more detailed personas.

5 Wireframe

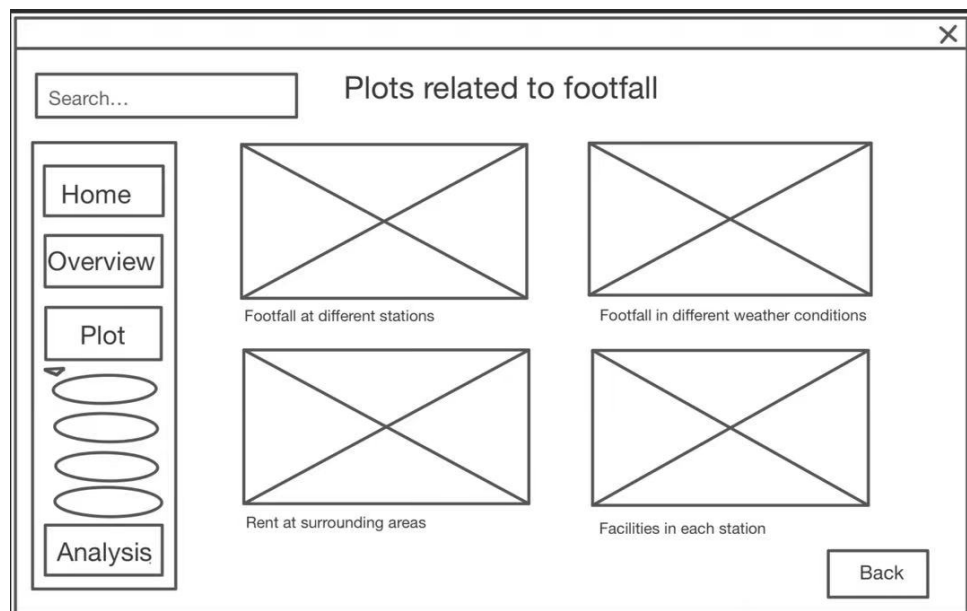


Figure 3: Wireframe