

Callum Thomas

callumdavidthomas@gmail.com | +61 480 450 987 | Melbourne, Victoria

Software Engineer

Overview

- Personal** I am a Traffic Engineer turned Software Engineer who is passionate about the dynamic and fast-changing world of technology. With a strong background in engineering and finance and an 8-year career as a consulting engineer, I bring a unique perspective to the field of coding, combining my analytical mindset, problem-solving skills, and commitment to continuous learning. I am eager to step into the world of software engineering and be a part of creating exciting and impactful projects.
- Portfolio** <https://callumdavidthomas.com>
- Education** **University of Auckland, 2015**
- Bachelor of Engineering (hons), Civil and Environmental
 - Bachelor of Commerce, Finance & Commercial Law

Software Engineering

TrafficTools – Software Engineer

Current

Traffic Tools is a personal project of mine where I have created a free online tool for use by anyone within the town-planning industry. The web application aims to provide common tools and calculators to assist professionals and lay-people to undertake high-level traffic engineering analysis, while encouraging innovation and knowledge-sharing within the profession through an online forum.

In developing the Traffic Tools web application, I have demonstrated my understanding of and application of web development frameworks. I built Traffic Tools using **react** with **typescript** (next.js framework), **Google-firebase** for user authentication, and **Chakra-UI** for my component library.

This web application features a forum with complete CRUD functionality and user authentication, while the other tools feature a wide range of react.js principles including component-based architecture, state management, next.js router, data-fetching, call-back functions, and responsive design.

The completed application can be found online at www.traffictools.com.au and I would be happy to answer any questions related to it or provide code examples as required.

CentreSafe – Software Engineer

2021

CentreSafe is a risk management service created for use by large companies and NGOs. The CentreSafe portal allows users to quickly understand where the critical risks lie within their organisation, and to forecast upcoming risks.

I built CentreSafe using the LAMP software stack, which includes **PHP**, **MySQL** and hosting via **AWS**. The application uses the MVC framework which allows a modular approach to programming and segments the backend and frontend development processes.

While working on the CentreSafe webapp I have gained an understanding of the business side of software development having led startup pitches, collaborated with internal team members and demonstrated the use of agile methodologies.

Other

- Excel and VBA data analytics, macros, sanitisation, etc.
- Completed CodeAcademy courses in the following: PHP, MySQL, HTML, CSS, JavaScript, ReactJS.

Professional Skills

Working in cross-functional teams. Throughout my professional career as a consulting engineer, I have collaborated with professionals from diverse disciplines, such as architects, town planners, and civil engineers, to achieve optimal design solutions. By actively participating in multidisciplinary meetings and workshops I contributed my expertise, informing decisions and delivering successful outcomes.

Communication and stakeholder management have been crucial to my role as a consulting engineer. I regularly interacted with government officials, project managers, and clients to understand their requirements, address concerns, and provide regular updates on project progress. For example, during a Warrnambool traffic management project I facilitated public consultation sessions to gather feedback from residents and local businesses. By actively listening, empathising, and presenting technical information in a clear and accessible manner, I fostered positive relationships with stakeholders and ensured their needs were met while achieving project objectives.

Problem solving and adaptability. As a traffic engineer, I encountered various challenges that required innovative problem-solving and adaptability. For a major subdivision development project in Dubbo, I developed a customized traffic network model, adapting to changing requirements and effectively communicating results to the client and local government. By developing a simple workflow and user-interface to the complex model I was able to effectively communicate the results to the client and local government. I consistently assessed situations, proposed solutions, and managed resources to mitigate any potential issues.

Project management and organization have been prominent to my success as a traffic engineer. For a major road construction project, I coordinated activities, developed detailed project plans, and closely monitored timelines and budgets. Through prioritization, delegation, and progress tracking, I successfully delivered projects on time, meeting client expectations and regulatory requirements.

Work Experience

Amber Organisation – Senior Traffic Engineer

2021 - 2023

As a Senior Traffic Engineer at Amber Organisation, I successfully led and managed a wide range of traffic engineering projects for diverse clients. My expertise and guidance played a crucial role in developing effective traffic engineering strategies aligned with industry standards and best practices.

In my role, I demonstrated strong project management skills and business understanding. I ensured strict adherence to project timelines and budgets while maintaining excellent communication with clients. Notably, I spearheaded a major subdivision project, developing new analysis techniques and communicating these to council and government authorities. Through my proactive approach and attention to detail, I successfully completed projects on time and within budget, earning the trust and satisfaction of clients.

I showed extensive technical expertise in my role, utilising advanced traffic modelling techniques and software tools to analyse traffic flow, optimise signal timings, and conduct capacity analyses. Additionally, I have excelled in stakeholder engagement, effectively communicating technical findings and recommendations to diverse audiences, including technical and non-technical stakeholders.

Stantec – Project Engineer

2019 – 2021

- Client-facing role providing traffic and transport consultation to public and private clients.
- Broad scope of traffic engineering services including traffic and transport assessments, risk assessments and RSAs, traffic impact assessments, SIDRA modelling, FLPs and swept paths, movement and place assessments, transport strategies, and traffic management plans.
- End-to-end project delivery and client relationship management.

Other

- Eligible to work and live in Australia (New Zealand Citizen).
- Valid driver's licence (Victoria).
- References available upon request.