

Tom Barthelmeh

Fourth year Software Engineering student at the University of Canterbury

I am a highly-motivated student at the University of Canterbury who enjoys problem-solving. I love a challenge and love to learn new things and improve on my current knowledge whether it be technical or soft-skills.

I am looking for a role that challenges me daily and where I can apply the software engineering skills that I have learnt in a professional environment. My main interests are in web and mobile development and making applications that have a direct benefit to clients.

Professional Experience

Tutor, University of Canterbury

Christchurch • February 2024 – Present

- In **S1**, I tutored a third year course titled *Web Computing Architecture* which involved developing a REST API using **ExpressJS**, and building a front-end on top of the API using **React** and **Typescript**.
- In **S2**, I am currently tutoring a second year software project course that teaches students to work in small teams and to use the **SDLC**.

Software Engineer Intern, Cavotec

Christchurch • November 2022 – February 2024

- I developed an Automated Factory Acceptance Testing application using **Django**, **TailwindCSS**, and **Javascript** which allowed operators to use an HMI to run automated factory acceptance tests, saving time.
- During the summer of 2023-2024, I developed custom machine learning models trained on hand-annotated data to detect and provide feedback on obstructions on a ship's hull with **>90%** accuracy. This project used **OpenCV**, **YOLOv8**, **Tensorflow**, and **OPC UA**.
- At the end of my internship I migrated their internal website to use **React**, **TailwindCSS**, and **PHP** as a backend.

Projects

Portfolio Website - tombarthelmeh.software

This portfolio website showcases my previous projects as well as my current web development skills. This project used **React**, **Typescript**, **TailwindCSS**, and **Vite**

Movie Critic Web Application

I first developed an API using **Typescript**, **ExpressJS** with **Node**, and **MySQL**. I then integrated a front-end designed using **React**, **Typescript**, **HTML**, and **CSS**. This allowed users to view, rate, edit, and publish films.

FlatMates

A simple application to keep flats organised. Uses **React**, **Tailwind**, **Vite**, and **Rust**.


Social Media Sporting Application

A social media web application for sporting events and teams using **Springboot** and **Thymeleaf**. This project used the **SCRUM** methodology with bi-weekly standups, **CI** with **GitLab**, peer reflection, and multiple presentations in **groups of 8**.

Slack Review Bot

I created a bot that integrates with Slack using **Typescript** to randomly generate a reviewer for a task as we had issues with reviewing as a team. This was tested internally and drastically improved our review time.

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 github.com/barthelmeh

Technical Strengths

React

Typescript

Agile

Git

Java

Python

React Native

Education

University of Canterbury

February 2021 – November 2024

BE(Hons) in Software Engineering
7.0 GPA

References

Patrick Browne, Cavotec

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