

Tom Barthelmeh

Fourth year Software Engineering student at the University of Canterbury

I am a highly-motivated fourth-year software engineering 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 development as well as using AI and machine learning on interesting new problems.

Professional Experience

Tutor, University of Canterbury

Christchurch • February 2024– June 2024

- I was asked to tutor a third year course titled *Web Computing Architecture* which involves developing a REST API using **ExpressJS**, and then building a front-end on top of the API using **React** and **Typescript**.

Software Engineer Intern, Cavotec

Christchurch • November 2022 – February 2024

- 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 and gather reports in JSON during the summer of 2022-2023.
- Was invited back during my holidays to work on small projects including automatic file transfer using **FTP** and **Powershell**.
- 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. 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

Social Media Sporting Application

During this year-long 7-person group project, we developed a social media web application for sporting events and teams using **Springboot** and **Thymeleaf**. This project used the **scrum** methodology with bi-weekly standups, continuous integration, peer reflection, and multiple presentations.

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.

Slack Review Bot

During the year-long project I noticed we had issues with reviewing. To fix this, I created a bot that integrates with Slack using **Typescript** to randomly generate a reviewer for a task. This was tested internally in our team and improved our review time drastically.

Personal Website - *tombarthelmeh.software*

During the summer I also developed a portfolio website to showcase my projects and skills in developing a front-end website. This used **React**, **Typescript**, **TailwindCSS**, and **Vite**

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Technical Strengths

React

Git

Python

Agile

Java

Typescript

Education

University of Canterbury

February 2021 – November 2024

BE(Hons) in Software Engineering

7.0 GPA

References

Patrick Browne, Cavotec

New Product Development Lead

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