

Marcus Marinelli

Software Engineer

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Work Experience

Vitrafy, Software Engineer

March 2025 - current

- Develop responsive, enterprise grade UI using Next.js and Chakra UI, leveraging Zod and TanStack for state management and validation.
- Design and implement backend services using Node.js and Express, building the core functionality of the application.
- Act as the team SME for Temporal, the software we use for orchestration of distributed backend workflows.
- Contribute to system architecture decisions, lead architectural discussions and seminars, and review and approve pull requests from junior engineers.
- Facilitate agile ceremonies including daily stand-ups and sprint planning, collaborating closely with the tech lead to refine stories and plan deliverables.

EY, Software Engineer

Feb 2022 - September 2024

- I operated as a full-stack developer on a project for a major Australian health insurer. Our project team built the customer and consultant portals for the company that are used today by over 250,000 members. In this role, I was responsible for building new features end-to-end. This involved building performant APIs in Go and creating reusable and modular components for the front-end using the Vue framework. The tech stack comprised of Vue.js, Node.js, Go, and Azure cloud.
- I was previously a full-stack developer for an international insurance company. This role involved building new features for the online payment services that over 100,000 customers would use to pay their insurance premiums. I created composable components in React that would be leveraged to create the FE for the insurer's different brands and extended the features of the payment backend. The tech stack was React, Node.js and Java.
- I was part of a data migration project for a large multinational insurance company. This project involved extracting data from multiple legacy systems and migrating a new big data solution critical for the company's future advertising campaigns. The tech stack included PostgreSQL, Python, Bash and Jenkins.
- I was a key contributor to a DevSecOps tool, part of an internal initiative at EY. The tool automated testing and deployment of smart contracts, ensuring contracts would only be deployed post successful unit tests, fuzzing tests (Echidna) and simulated attacks via Mythril.
- I produced a micro-frontend tutorial which was successfully used to onboard new joiners to a large project within Digital Engineering. The tutorial covers MFEs, React.js & Docker.

EY, Tech Consultant Intern

Jan 2020 - July 2020

Throughout the course of my internship, I was part of a project at a global health insurer aimed at re-engineering current practices, by both digitizing and streamlining the existing claims processes.

- I utilised Python (numpy, pandas & pychart) to analyse and visualise in-house claims data.
- I developed a work allocation tool using Python, Power Query and VBA. The tool is in use today and is relied upon to ensure high-priority work is always allocated with a buffer, preventing fines or penalties incurred for missing critical deadlines, an issue that the client was struggling with.
- I conducted user acceptance testing with the client to ensure the tool being developed fulfilled the business requirements and had a satisfactory user experience.

Education

Bachelor of Software Engineering (Honours), Monash University

- Graduated July 2021
- 3.5 GPA & 80 WAM
- 2020 semester 1 DUX of the Industry Based Learning internship unit
- Faculty of Engineering Dean's honour list 2019 & 2020
- Final year ML research project titled "AH-CID: A Tool to Automatically Detect Human-Centric Issues in App Reviews" was published in the proceedings of the 16th International Conference of Software Technology

Software Development Skills

Programming Languages

- JavaScript, TypeScript, Java, Go, CSS, HTML, Node.js, Python, Solidity, c, c# & Rust

Frontend Frameworks

- React.js, Vue.js, SvelteKit, Angular & Next.js

Coud & DevOps

- Azure Cloud, Docker, Linux, GitHub actions, Jenkins, Kubernetes, Bash & Nginx

Blockchain Development

- Foundry, Hardhat, Slither, Echidna, Aderyn & Mythril

Data

- PostgreSQL, SQL, SQLite, MongoDB & PySpark

Extracurricular

- I have been participating in competitive security review/ code audit contests and recently finished joint 5th in the CodeHawks first flight mystery box challenge. My username in this contest was 0xNelli.
- I have a technical blog in which I reflect on the learnings of developing new side-projects and the outcomes of code audit contests. The articles I have written can be found here.
- I enjoy learning new programming languages and building new projects, which can be seen in my GitHub. In my latest project, I built an app using SvelteKit and SQLite and hosted it on a VPS, to better learn about these technologies and self-hosted deployment.
- I am upskilling my blockchain development and security skills by completing courses on Cyfrin Updraft, this has aided me in blockchain auditing competitions I have participated in this far.
- Whilst at EY I was the Melbourne team lead for the social & cultural team and ran various types of events in this capacity.