



Hey - I'm Dan.

I love designing and building full-stack applications, crafting user experiences on impactful projects, and overall, working in motivated communities that value creativity and innovation.

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## EXPERIENCE

### 〈〉 Freelance Software Engineer (Jun 2025 – Current)

React, TypeScript, Tailwind, Node.js, Tanstack Start, Next.js, PostgreSQL, Drizzle, Mastra, AI SDK, Inngest

- Atlas – a course-integrated AI tutor. I've been designing and implementing chat interfaces, admin pages, as well as backend systems to support robust AI workflows.
- Umi – an aligned, and guarded, chatbot that supports people through online image-based abuse. Developed in partnership with RMIT – Global, Urban, and Social Studies.
- The Plant Broker – a Shopify store selling online plants to regional Melbourne. I've built an efficient stock scraping and sync engine that automates mass inventory and price changes.

### ❖ Primary (Aug 2024 – Jun 2025)

Senior/Lead Software Engineer

React, TypeScript, Tailwind, Remix, Node.js, PostgreSQL, Prisma

- Spearheaded front-end development using React + TypeScript in Remix, collaborating with designers to build polished, user-centric interfaces.
- Delivered impactful features across the full stack by bridging technical gaps, proposing innovative solutions, and maintaining a “get-it-done” mindset.
- Led and planned product-delivering projects in collaboration with engineering and design.

### 💻 ReadCloud (Mar 2023 – Aug 2024)

Senior/Lead Software Engineer

React, TypeScript, Tailwind, Node.js, Deno, AWS, PostgreSQL, MongoDB, PHP, Java, Kotlin

- Led a small team of engineers through planning, mentoring, and hands-on development of core projects, including a full-stack LMS plugin used by ~10k active users.
- Initiated AWS cost savings and optimizations, and the migration of existing infrastructure to CDK + SST.
- Introduced observability infrastructure like CloudWatch, Sentry, and analytics using PostHog.
- Maintained and/or migrated legacy PHP, Python, and Java + Kotlin systems.

## **CultureAmp (Nov 2019 – Mar 2023)**

### Senior Software Engineer

[React](#) [TypeScript](#) [Node.js](#) [AWS](#) [Kotlin](#) [Elm](#)

- Contributed to full-stack development projects involving React, TypeScript, Node.js, and Kotlin.
- Maintained the in-house design system (Kaizen Design System) and optimized development processes across teams by automating dependency updates using Renovate.
- Collaborated on SRE-focused projects involving AWS and CDK, enhancing system reliability and deployment efficiency.
- Worked on event-sourcing architectures and CQRS-based applications.

## **ReadCloud (Oct 2017 – Nov 2019)**

### Software Engineer

[React](#) [TypeScript](#) [Node.js](#) [MongoDB](#) [AWS](#) [Java](#) [Kotlin](#)

- Developed scalable features using React, TypeScript, Node.js, and MongoDB.
- Migrated infrastructure from Docker-based deployments on vanilla VMs to AWS-backed automated CI/CD pipelines.
- Designed intuitive user interfaces in collaboration with designers, improving product adoption.

## **Airwallex (Nov 2016 – Oct 2017)**

### Junior-Mid Software Engineer

[React](#) [TypeScript](#) [Flow](#) [Docker](#) [Java](#) [Kotlin](#) [CassandraDB](#)

- Mostly frontend engineer with exposure to Kotlin, Java + Spring, React, Typescript + Flow.
- Gained experience with distributed systems such as Cassandra DB, RabbitMQ
- Became adept with Docker (incl. Compose and Swarm, and some Kubernetes)

## EDUCATION

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### **Bachelor of Science (Computer Science) Honours 1st Class**

Jan 2020 – June 2021

RMIT

[Transcript](#) | [Thesis](#)

GPA: 4.0

### **Bachelor of Software Engineering**

Jan 2013 – Nov 2016

RMIT

[Transcript](#)

GPA: 4.0



### **Umi Chatbot (Aug 2025 – Current)**

#### **Engineer and Research Assistant**

This project is about uplifting Umi – a chatbot for helping people navigate online abuse of personal and sensitive images. It's packed with useful knowledge about what to say and when, and about relevant legislation. We're now improving its user experience, ability to collect more meaningful and researchable data, and use cutting edge research to greatly improve information retrieval and conversational quality.



### **The Plant Broker (Jan 2025 – Current)**

#### **Consulting Engineer**

A Shopify store selling plants online to metro and regional Melbourne, where I develop backend automation solutions to solve stock/logistical problems that are key to the business' success. This project gave me a lot of experience in scraping, background jobs in Next.js, and Shopify's domain models (their GraphQL schema in particular).



### **Equalised Odds is not Equal Individual Odds: Post-processing for Group and Individual Fairness (FAccT 2024)**

#### **Co-author**

This paper highlights a fundamental tension between group fairness (e.g. accuracy between demographics) and individual fairness (e.g. accuracy between any two people). We show that widely used existing post-processing methods involving randomisation violate individual fairness and prevent some groups from ever accessing the same classification odds as others. To address this, we introduce a new fairness notion called equalised individual odds and propose continuous, monotonic probability functions constrained by Lipschitz continuity to replace step-like decision rules. This method ensures smooth treatment across thresholds, preserves predictive accuracy, and guarantees that all individuals can access the full range of classification odds available to any group. The approach demonstrates, on widely used test sets, that it can maintain group fairness while improving individual fairness and transparency, thereby reconciling the conflict between these two fairness objectives.

### **Referees available on request**

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