

# Ethan Cavill

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San Francisco Bay Area, California

[linkedin](#) | [github](#) | [portfolio](#)

## Experience

### Clai Studios

Mar 2024 - Present

Full Stack Engineer

San Rafael, CA

- Consultated for a pain management web application using React and Firebase, improving treatment outcomes and client onboarding through personalized routine planning and digital coaching.
- Implemented marketing agency automations to web scrape and schedule content posting using Python, GCP, and Selenium, **increasing output by 5x**.
- Consulted with the founder of a health application on selecting tech stack, planning features, and acquiring talent.

### Tangible AI

Oct 2023 - Jan 2024

Machine Learning Engineer Intern

San Diego, CA

- Developed and evaluated a seq-to-seq neural network translator using PyTorch, featuring two GRU layers.
- Supported a Django application for creating LLM and rule-based chatbots to enhance user interaction and support.
- Developed a vector-based search engine leveraging BERT to improve corpus searchability, resulting in an **88% improvement** in recall over TF-IDF. Later forked to create 'Knowt,' an open-source RAG project.
- Presented findings and insights to **30+ attendees** at a Python User Group, with an [accompanying blog post](#).
- Proofread and published edits to 'Natural Language Processing in Action,' improving clarity in **10 chapters**.

### Adelaide MRI

Jul 2021 - Oct 2023

Full Stack Engineer

Adelaide, SA

- Developed and maintained RadReport, a radiology reporting system that enabled 2 radiologists to generate **100+ reports daily**, increasing productivity and accuracy by **4x** compared to conventional systems.
- Created an invoicing service using MediPass payment API and webhooks to reduce errors and inconveniences.
- Led rostering system migration from React to Angular, improving maintainability and reducing dev overhead.
- Wrote and maintained unit tests with PyTest (**90%+ coverage**) and end-to-end tests using Cypress.
- Led the development of a patient booking system using React, GCP, and FastAPI, alleviating call burden **by 50%**.
- Managed large codebase version upgrades, requiring major refactoring to ensure production stability.
- Implemented strict linting rules and TypeScript compiler settings, reducing front-end Sentry errors **by 40%**.
- Conducted an interview for engineering position, evaluating candidate to ensure technical and cultural fit.

## Projects

### Deep Work Timer | Next.js, Docker, AWS, Redis, Postgres, Jotai, GraphQL, Strawberry, FastAPI, SQLAlchemy

- Developed a productivity application to optimize focus tracking through a streak-based social ranking system.
- Integrated authentication and authorization using Redis and PostgreSQL for fast, secure session management.
- Implemented a **containerized development** environment with Docker, enhancing consistency and portability.
- Experimented with distributed microservice architecture using RabbitMQ to enhance scalability and fault tolerance.
- Provided an intern with modern full-stack development experience, assigning tasks and conducting code reviews.

### Portfolio | Next.js, Tailwind CSS, Framer Motion, MDX, Vercel

- Developed a portfolio website utilizing React and Markdown to showcase projects, services, and insights.

### Devarity | PHP, MySQL, Python, Bootstrap, JQuery

- Developed an indie game distribution platform providing fairer profit margins, launching with over **50 titles**.
- Spearheaded distributor acquisition efforts, successfully securing partnerships with **four** indie publishing studios.
- Led strategic decision-making across design, marketing, product management, engineering, and launch operations.
- Coordinated outsourcing of design and engineering efforts to aid in timely and seamless launch.

## Skills

Languages	Python, JavaScript, TypeScript, SQL, HTML/CSS, Bash
Technologies	React, Angular, Redux, RxJS, Docker, Flask, FastAPI, Postgres, MongoDB, Redis, Celery, RabbitMQ, PyTorch, PyTest, Cypress, Sentry, Selenium, GCP, AWS
Concepts	Full-Stack Development, Front-End Development, System Design, State Management, Reactive Programming, Agile, Scrum, Machine Learning, Data Science, Distributed Systems, REST API, GraphQL API, Unit Testing, End-to-End Testing, Version Control, Git, CI/CD

## Education

### Bachelor of Mathematical Sciences

Jul 2022 - Dec 2023

University of Adelaide

Adelaide, SA

- Accelerated linear algebra and calculus classes foundational for computer science and machine learning.

### Bachelor of Economics and Finance

Mar 2018 - Nov 2020

University of Adelaide

Adelaide, SA

- Foundations in modern and classical economic theory with application of financial modelling, statistics and data analytics.