# Ethan Cavill

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San Francisco Bay Area, California

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

## Experience

**Clai Studios**                                                               **Mar 2024 - Present**

*Full Stack Engineer*                                                                  *San Francisco, CA*

- Consulted on key architectural and design decisions for a startup improving pain-management outcomes for clients.
- Implemented automations to web scrape and schedule social media posting using Python, GCP, and Selenium, **increasing output by 3x**.
- Consulted with the founder of a health-ed startup on software architecture, feature development, and talent acquisition strategies.

**Tangible AI**                                                                    **Oct 2023 - Jan 2024**

*Machine Learning Engineer Intern*                                                           *San Diego, CA*

- Developed and evaluated a seq-to-seq neural network translator for language translation using PyTorch.
- Improved the user experience of a Django built LLM and rule-based chatbot management system by reducing bugs.
- Developed a vector-based (BERT) search engine to improve corpus searchability, resulting in an **88% improvement** in recall over TF-IDF. Forked to create 'Knowt', an open-source RAG project.
- Presented findings on information retrieval systems to **30+ attendees** at a Python User Group, with [blog](#).
- 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 report accuracy by **2-4x** over conventional systems.
- Planned and developed invoicing software that integrated with MediPass payments API and webhooks.
- Led migration of internal rostering system from React to Angular, improving maintainability.
- Wrote and maintained integration and unit tests (**90%+ coverage**) with PyTest and end-to-end tests with Cypress.
- Led the development of a patient booking system using React, GCP, and FastAPI, alleviating call burden **by 50%**.
- Managed large codebase version upgrades, often requiring refactoring of business critical components.
- Implemented strict linting, compiler settings and other tooling to improve DX and reduce sentry errors **by 30%**.
- Aided in conducting engineering interviews, evaluating candidate's technical skills and cultural fit.

## Projects

**deepworktimer.io** | Next.js, FastAPI, SQLAlchemy, PostgreSQL, Redis, Docker, Linode, AWS

- Developed a productivity system that features a streak-based ranking system to enhance engagement on cognitively demanding tasks.
- Integrated authentication and authorization using Redis and PostgreSQL for fast, secure session management.
- Implemented **containerized** environments with Docker, improving deployment and developer onboarding time.
- Experimented with RabbitMQ and distributed microservice architectures to enhance scalability and fault tolerance.
- Mentored a CS student on contributing to open source, providing hands-on experience in full-stack development.

**ethancavill.me** | Next.js, Tailwind CSS, Framer Motion, MDX, Vercel

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

**devarity.com** | PHP, MySQL, Bootstrap, JQuery

- Developed an indie game distribution platform providing fairer profit margins, launching with over **50 titles**.
- Spearheaded distributor acquisition efforts, 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

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|---|---|
| **Languages** | Python, JavaScript, TypeScript, Golang (Go), SQL, HTML/CSS, Bash |
| **Technologies** | React, Angular, Redux, RxJS, Docker, Flask, FastAPI, Django, PostgreSQL, MongoDB, Redis, Celery, RabbitMQ, PyTorch, PyTest, Cypress, Sentry, Selenium, GCP, AWS |
| **Concepts** | Full-Stack Development, Front-End Development, Back-End Development, Systems Design, State Management, Reactive Programming, Technical Writing, Agile, Scrum, Algorithms and Data Structures, Machine Learning, Data Science, Distributed Systems, REST API, GraphQL API, Integration Testing, Unit Testing, End-to-End Testing, Version Control, Git, CI/CD, DevOps, Observability |

## 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.