Ethan Cavill

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

Experience

Clai Studios   **Mar 2024 - Present**

Full Stack Software 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   *San Diego, CA*

- Created an open-source vector space (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](.).
- Reduced bugs and improved user experience in **Django LLM chat-bot management software**.
- Proofread and **published edits to 'Natural Language Processing in Action,'** improving clarity in 10 chapters.
- Developed and evaluated a PyTorch seq-to-seq neural network for language translation.

Adelaide MRI   **Jul 2021 - Oct 2023**

Full Stack Software Engineer   *Adelaide, SA*

- Developed patented radiology reporting software with Angular, Flask, and ML models; **boosting output by 2-4x**.
- Transitioned invoicing process to automated solution with MediPass payment **API and webhook integration**.
- Wrote **integration and unit tests with PyTest (90%+ coverage)** and end-to-end tests with Cypress.
- Led development of patient booking system using React, GCP, and FastAPI, **alleviating call burden by 50%**.
- **Managed large codebase version upgrades**, requiring careful refactoring of business critical components.
- Led frontend migration of rostering software from React to Angular, improving maintainability.
- Implemented strict linting and compiler settings that **improved DX and reduced sentry errors by 30%**.
- Aided in engineering interviews, evaluating candidate's technical skills and cultural fit.

Projects

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

- Developed a streak-based productivity system that improves focus and engagement on cognitively demanding tasks.
- Authentication and authorization with Redis and PostgreSQL for **fast and secure session management**.
- Implemented **containerized environment with Docker**, improving deployment and developer onboarding time.
- Wrote **distributed microservice architecture** with RabbitMQ/Celery to enhance scalability and fault tolerance.
- Mentored a CS student on contributing to open source, providing hands-on experience in full-stack development.

devarity.com | PHP, MySQL, Bootstrap, JQuery

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

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

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

Skills

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

Education

Bachelor of Mathematical Sciences   **Mar 2017 - Nov 2021**

University of Adelaide   *Adelaide, SA*

- Linear algebra and calculus classes foundational to computer science and machine learning.
- Algorithm and data structures with focus on efficient problem-solving.