Ethan Cavill

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San Rafael, California

linkedin | github | portfolio

Experience

Clai Studios   **Mar 2024 - Present**

Full Stack Engineer   *San Rafael, CA*

- Consulted 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 the founder of a health application on tech stack selection, feature planning, and talent acquisition.

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.
- Proofread and published edits to 'Natural Language Processing in Action,' improving clarity in **10 chapters**.
- 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**.

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 the 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%**.
- Conducted an interview for engineering position, evaluating candidate to ensure technical and cultural fit.

Projects

Deep Work Timer | NextJS, Docker, AWS, Redis, Postgres, Jotai, GraphQL, Strawberry, FastAPI, SQLModel

- 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, Agile, Scrum, Machine Learning, Data Science, Distributed Systems, REST API, GraphQL API, Unit Testing, End-to-End Testing, Version Control, Git, CI/CD, Reactive Programming

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 modelling, statistics and data analytics.