

Eric Zhu

Experienced software engineer focused on building backends and machine learning systems. I am currently working on NotesCast, a site that allows you to discover, review and recall key insights from podcasts.

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Experience

NotesCast, Sydney | Founder, Software Engineer Jul 2023 - Present

- Built a site that translates podcasts into more digestible formats using transformers
- Users can search for semantically related information to discover relevant or related podcasts
- Alexandria is a RAG LLM that uses notes and transcript data with GPT-4 for podcast Q&A
- Extracts key information using GPT-3.5 and Mixtral with Chain of Density prompting and prompt compression
- Data is embedded with sliding windows using AdaV2 and SPLADE for hybrid vector search

National Australia Bank, Sydney | Software Engineer Intern Jan 2022 - Feb 2023

- Utilized Spring and Jenkins with AWS to create robust microservices, significantly enhancing TLM capabilities
- Engineered the feature enabling businesses to process inbound transactions using PayID
- Triaged and fixed a backpressure bug in Kafka where payment transactions would disappear during high traffic
- Authored comprehensive documentation for newly developed features, facilitating smoother transitions into production
- Enhanced deployment and testing protocols using Python and HashiCorp Vault, achieving an 8% improvement in QA efficiency

The University of Sydney, Sydney | Research Engineer Nov 2021 - Apr 2022

- Contributed to the design of a semantic segmentation algorithm for detecting anomalous contextual changes in streaming sensor data
- Designed and implemented a website using Gatsby and Contentful CMS for the demo of research results

MAPFRE Insurance, Shanghai | Software Engineer Intern Nov 2019 - Feb 2020

- Collaborated with a senior engineer to create a new mobile app using React and Vue.js, which resulted in a 18% reduction in incident response time using an optimised routing algorithm

Education

University of New South Wales 2022

Bachelor of Science, Computer Science (Artificial Intelligence)

Selected Projects

"WEBSITE" | github.com/ericfzhu/website Sep 2023 - Dec 2023

- A blank canvas for creativity, built using Next.js, Framer Motion, and p5.js

DSLResNeXt | <https://github.com/ericfzhu/DSLResNeXt> Oct 2023 - Oct 2023

- Image-to-image translation using ResNeXt-based GAN

Skills & Interests

Languages: Python, Java, TypeScript, C

Libraries: PyTorch, React, Next.js, Gatsby, Spring, LangChain, Docker, Firebase

Databases: PostgreSQL, PineconeDB, MySQL, MongoDB, SQLite, DynamoDB, Redis

Certifications

AWS Certified Cloud Practitioner, Microsoft Certified: Azure AI Fundamentals