

Eric Zhu

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Experienced software engineer focused on building backends and machine learning systems in Python and Java. I am currently working on NotesCast, a site that provides condensed notes of the top podcasts in business, technology, and health, allowing users to learn from the best in the world in minutes.

Experience

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

- Built a site that distills knowledge from podcasts by transcribing audio using OpenAI Whisper, an ASR model
- Transcriptions are processed using LLMs with Chain-of-Density prompting, which is then embedded in sliding windows with dense and sparse models for hybrid vector search
- Users can search for semantically related information to discover relevant podcasts
- Alexandria is a Retrieval Augmented Generation agent that uses podcast knowledge with LLMs for Q&A

National Australia Bank, Sydney, Australia | 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 Terraform, achieving an 8% improvement in QA efficiency

The University of Sydney, Sydney, Australia | 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, China | 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)

Skills & Interests

Languages: Python, Java, TypeScript, HTML, CSS, C, SQL, Solidity

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

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

Projects

"WEBSITE" | github.com/ericfzhu/website

- A canvas where coe is the paintbrush, built using Next.js, Framer Motion, and p5.js

Imitator | github.com/ericfzhu/imitator

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

Certifications

AWS Certified Cloud Practitioner, Microsoft Certified: Azure AI Fundamentals