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 an app that creates notes for podcast episodes from generated transcripts using Auto Speech Recognition
- Architected and deployed Alexandria, a RAG feature that uses notes and transcript data with GPT-4 for podcast Q&A
- NotesCast extracts key insights using GPT-3.5 and Mixtral with Chain of Density prompting and prompt compression
- Relevant data is embedded in sliding windows using AdaV2 and SPLADE for hybrid vector search

National Australia Bank, Sydney | Software Engineer Intern   Jan 2022 - Feb 2023
- Delivered robust production features for NPP using Spring on AWS, enhancing the capabilities of TLM
- Engineered and shipped the feature that enabled businesses to process inbound transactions using PayID
- Triaged and fixed a backpressure bug in Kafka where payment transactions would disappear during high traffic
- Improved deployment and testing procedures using Python and HashiCorp Vault, resulting in an 8% increase 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 | Sydney, Australia   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

DSLR ResNeXt | https://github.com/ericfzhu/DSLR-ResNeXt   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

Certifications

AWS Certified Cloud Practitioner, Microsoft Certified: Azure AI Fundamentals