Eric Zhu

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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.

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-Thought 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)
Treasurer, Executive at PCSociety, Lead Data Scientist at Redback Racing, Dev Lead at Enactus

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

Projects

"WEBSITE" | github.com/ericfzhu/website   Sep 2023 - Dec 2023
- A canvas where coe is the paintbrush, built using Next.js, Framer Motion, and p5.js

DSLR ResNeXt | github.com/ericfzhu/DSLR-ResNeXt   Oct 2023 - Present
- Image-to-image translation using ResNeXt-based GAN

Certifications

AWS Certified Cloud Practitioner, Microsoft Certified: Azure AI Fundamentals