ERIC ZHU

SOFTWARE ENGINEER

CONTACT INFORMATION

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EDUCATION

Bachelor of Computer Science (Artificial Intelligence)   Oct 2022
University of New South Wales, Sydney
Treasurer of PCSoc, Lead Data Scientist of Redback Racing and Dev Lead at Enactus

EXPERIENCE

National Australia Bank, Sydney | Software Engineer Intern   Jan 2022 - Feb 2023
- Developed a new feature in Java and Spring for the New Payments Platform with 2 people to enable inbound PayID payments for businesses and performed handover for feature deployment into production
- Resolved a Confluent Kafka connector bug in Java that resulted in a 3% of transactions failing to process and a bug that caused duplicate messages
- Automated testing procedures using Python and Jenkins, resulting in an 8% improvement in QA efficiency

University of Sydney, Sydney | Research Engineer   Nov 2021 - Apr 2022
- Implemented the FLOSS algorithm for detecting anomalous contextual changes in streaming sensor data
- Developed a website using Gatsby, Emotion and Contentful for the showcase of research results

MAPFRE Insurance, Shanghai | Software Engineer Intern   Nov 2019 - Feb 2020
- Created a new app using React and Node.js in a team of 4 that resulted in a 18% reduction in incident to response time due to an improved UX and routing algorithm for drivers

PROJECTS

NotesCast | notescast.com   Jul 2023 - Present
- Creating a better way to discover and review key insights from the best technology, wellbeing and business podcasts
- Transcribes RSS feeds for podcasts using an ASR (Automatic Speech Recognition) model
- Extractes key insights from transcripts using GPT with progressive density prompting and embedded into Pinecone VectorDB with sliding window chunks using ada-002 and SPLADE-V2 for dense-sparse hybrid vector search
- GPT chat feature uses HyDE (Hypothetical document embeddings) to modify the user's question or query, which is embedded for dot product similarity search with Pinecone for RAG (Retrieval Augmented Generation)
- Implemented cross encoder reranker into RAG that improved query hit rate by 4% to 91%

Website | ericfzhu.com | library.ericfzhu.com | github.com/ericfzhu/website   Sep 2023 - Present
- A creative endeavor and exploration of the mind - Next.js, Tailwind, Framer Motion, and p5.js

SKILLS

Programming languages: Python | Java | Javascript | Typescript | C | SQL | React Native
Frameworks: PyTorch | Tensorflow | React | Next.js | Cypress | Spring | LangChain | Docker | OpenSearch | Firebase
Databases: PostgreSQL | Pinecone VectorDB | MySQL | RedisDB | MongoDB

CERTIFICATIONS

AWS Certified Cloud Practitioner, Microsoft Certified: Azure AI Fundamentals