

Eric Zhu

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Experienced software engineer focused on building backends and machine learning systems in Python and Java. 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. Also a scholar of philosophy and design.

Experience

NotesCast | Founder, Software Engineer Jul 2023 - Present

- NotesCast uses Automatic Speech Recognition and Large Language Models alongside various prompting techniques, such as Chain-of-Density, to transform podcast audio files into summaries
- The data is also embedded to power Alexandria, a Retrieval Augmented Generation agent that allows users to query for industry-specific knowledge, as well as a recommendation engine for users to discover related content

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

- As a member of the Transaction Lifecycle Management team, I delivered robust production features for the New Payments Platform using Java, Spring, and Jenkins on AWS under an Agile software development model
- My efforts were instrumental in delivering a business critical feature that enabled businesses to process inbound transactions using PayID, which had a projected revenue impact of 3-5 million per annum
- Triaged and fixed a backpressure performance bug in Kafka, where payment transactions would occasionally during high-traffic loads, helping the system achieve 5,000 transaction messages per second
- Improved deployment and testing CI/CD pipelines using Python, Jenkins, and Terraform, resulting in an 8% increase in QA efficiency

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

- Contributed to the design of a Fast Low-cost Online Semantic Segmentation model for detecting anomalous contextual changes in streaming sensor data
- Designed and implemented a website using Gatsby and Contentful CMS for the research project

MAPFRE Insurance | Software Engineer Intern Nov 2019 - Feb 2020

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

Montblanc | Supply Chain Management Intern Nov 2018 - Feb 2019

- Forecasted demand and oversaw warehouse and storefront inventory stock levels using SAP Business One and NSI
- During the annual internal sales event, I handled product sales and customer service, which contributed to a 15% YoY increase in sales

Education

University of New South Wales 2022

Bachelor of Science, Computer Science (Artificial Intelligence)

Skills & Interests

Languages: Python, Java, TypeScript, JavaScript, HTML, CSS, C, SQL, Solidity, React Native

Libraries: PyTorch, React, Next.js, Gatsby, Vue.js, Spring, LangChain, Scipy, Terraform, Kubernetes, Framer Motion

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

Platforms: Notion, Figma, Canva, Runway ML, Excel, SAP, AWS, Firebase

Works

"WEBSITE" | github.com/ericfzhu/website | <http://ericfzhu.com/>

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

Imitator | github.com/ericfzhu/imitator

- Image-to-image translation using ResNeXt-based GAN
- Python, PyTorch, GAN

Palette | <https://github.com/ericfzhu/palette> | <https://palette.ericfzhu.com/>

- Color generator using Stable Diffusion XL
- TypeScript, Next.js, Stable Diffusion

Codex | <https://github.com/ericfzhu/codex> | <https://codex.ericfzhu.com/>

- On the memetic nature of wisdom
- Next.js, Three.js, and PineconeDB

Volunteer

UNSW Computer Enthusiasts Society | Treasurer, Delegate, Community Manager Jul 2021 - Oct 2022

- Managed society's finances and was responsible for ensuring that the society was compliant with the university's policies and procedures, especially in regard to the affiliation and applying for grants
- Hosted select events and workshops, as well as created the related materials and resources needed

Enactus | Software Engineer Dec 2021 - Apr 2022

- Worked with the EnAccess Maps team to develop a mobile app using React Native and OpenStreetMap to help disadvantaged individuals find and review wheelchair accessible restaurants
- The website for EnAccess Maps was constructed using Notion
- I was also responsible for building the backend of the CirCex, a platform that enables charity op-shops to easily catalogue their items for an online database

UNSW Redback Racing | Data Scientist Sep 2021 - Apr 2022

- Responsible for developing machine learning models to predict vehicle design parameters and optimize the performance of the next generation Formula SAE vehicle
- Architected a data pipeline to simulate custom vehicle designs using Assetto Corsa and analyse the results using Python on Jupyter Notebooks and Kedro

Certifications

AWS Certified Cloud Practitioner
Microsoft Certified: Azure AI Fundamentals