

# 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

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- NotesCast**, Sydney, Australia | 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 translate podcasts into its key insights
  - 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
- 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
  - Triageed 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 Vue.js and Node.js, which resulted in a 18% reduction in incident response time using an optimised routing algorithm

## Education

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**University of New South Wales** 2022  
Bachelor of Science, Computer Science (Artificial Intelligence)

## Skills & Interests

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**Languages:** Python, Java, TypeScript, JavaScript, HTML, CSS, C, SQL, Solidity  
**Libraries:** PyTorch, React, Next.js, Gatsby, Vue.js, Spring, LangChain, Docker, Firebase, Scipy, Terraform, Kubernetes  
**Databases:** PostgreSQL, PineconeDB, MySQL, MongoDB, SQLite, DynamoDB, Redis  
**Tools:** Notion, Figma, Canva, Runway ML

## Works

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- "WEBSITE"** | [github.com/ericfzhu/website](https://github.com/ericfzhu/website) | <https://ericfzhu.com/?windows=works>
- A canvas where coe is the paintbrush, built using Next.js, Framer Motion, p5.js, and Notion
- Imitator** | [github.com/ericfzhu/imitator](https://github.com/ericfzhu/imitator)
- Image-to-image translation using ResNeXt-based GAN, built using PyTorch
- Codex** | <https://codex.ericfzhu.com/>
- On the memetic nature of wisdom, built using Next.js, Three.js, and PineconeDB

## Certifications

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AWS Certified Cloud Practitioner, Microsoft Certified: Azure AI Fundamentals