

AARON TUA

Software Engineer

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SUMMARY

Penultimate Year Design & Artificial Intelligence (DAI) student with industry experience in developing scalable backend and distributed systems. Skilled in architecting robust systems, agile methodologies, and translating complex requirements into efficient technical solutions. Seeking to leverage my expertise in a dynamic AI-focused environment.

EDUCATION

Singapore University of Technology and Design <i>Bachelor of Science in Design and Artificial Intelligence, Minor in Computer Science</i>	Sep. 2021 – Apr. 2026 Singapore
<ul style="list-style-type: none">Relevant coursework: Machine Learning, Algorithms, AI & Human Computer Interaction, Service Design Studio. Current GPA: 4.38/5.00One of 19 students awarded the prestigious SUTD Technology and Entrepreneurship Programme (STEP) scholarship with a concurrent Master of Science in Technology Entrepreneurship	
University of California, Berkeley <i>Finance for Entrepreneurs, Marketing Research, Business Negotiation, Design Thinking</i>	Jan. 2024 – Aug. 2024 California, USA

WORK EXPERIENCE

Software Engineer Intern <i>Ripe</i>	Jun. 2024 – Aug. 2024 San Francisco, California
<ul style="list-style-type: none">Ripe is a startup developing scalable payment infrastructure solutions for Southeast Asian marketsDeveloped TypeScript API library for standardising QR payment processing for 4 countriesEnsured compliance with international payment QR standards despite lack of online documentation, producing documentation while preventing wrongful payment transfersBuilt and deployed frontend Next.js application using AWS Amplify	
Full-Stack Engineer, Blockchain Engineer <i>Tatsu Works</i>	Jan. 2022 – Aug. 2022 Singapore
<ul style="list-style-type: none">Tatsu Works is a startup developing games on Discord and TelegramDeveloped responsive React frontend for digital product launch, handling 2,500+ concurrent usersImplemented secure asset distribution system in Rust, managing \$2M+ in digital assetsArchitected scalable Node.js backend for their Discord chatbot's initial prototype back in 2016 when it was a hobby project, enabling seamless horizontal scaling to first 1 million concurrent user milestone	

FEATURED PROJECTS

Backend/DevOps Engineer - Kampung.SG	May. 2023 - Aug. 2023
<ul style="list-style-type: none">Spearheaded full-stack development of <u>Kampung.SG</u> interfaith learning portal in collaboration with Google and Being Bridges NGO, leading 4 bi-weekly Scrum sprints from design to implementationEngineered Kampung.SG on microservices architecture using Ruby on Rails, achieving over 90% test coverage with BDD frameworks Cucumber and Cypress, fully deployed on Google Cloud RunPrompt-engineered Gemma chatbot on Google Vertex to facilitate forum engagement and moderation	
Backend Engineer - HearMeOut	Jun. 2024
<ul style="list-style-type: none">Built a conversation bot for <u>HearMeOut</u>, a complete AI-powered call centre solution for optimising customer service interactions, achieving Top 8 Finalists out of 294 submissions at the 2024 Berkeley AI HackathonDeveloped main speech-to-speech call bot and its mood and tone analysis on Python microservices architectureBuilt frontend for the call user experience, presenting a live demo to judges and potential investors after 24 hours	
Full-stack Engineer - greenflags	Apr. 2024
<ul style="list-style-type: none">Developed frontend from design concept to product for <u>greenflags</u>, a social matching platform for potential roommates, achieving Best Design in SF Hacks 2024 in 48 hoursIntegrated backend and GPT-4 using LangChain to use chain-of-prompts and vector similarities in matching roommates' profiles based on semantic search	

OTHER PROJECTS

LangUR Language learning browser extension in Astro, won Best LLM Hack at Stanford's Treehacks	Feb. 2024
SAFMC 2024 Drone competition, Quarterfinalist in semi-autonomous and 2nd Runners in swarm category	Apr. 2023
DioAcademy No-code chatbot creator and adult learning platform for Dioworks, an edutech SME	Mar. 2019

TECHNICAL SKILLS

Languages: Typescript, Javascript, HTML, CSS, Python, SQL, C++, Rust
Libraries/Frameworks: Node.js, React, Tailwind, Next.js, Express, Flask, LangChain, Solana Anchor, Solidity
Tools: Git, Docker, MongoDB, Google Cloud Platform, AWS, Unix, Redis, PostgreSQL