

Brandon Ng Joon Hoe

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EDUCATION

Singapore University of Technology and Design

Expected Graduation: May 2026

- Bachelor of Engineering (Computer Science and Design), Honours - Third Year Student
- GPA 4.71/5.0, Honours w/ Highest Distinction, ASEAN Undergraduate Scholarship, Honours List 22/23
- Captain of SUTD Football, SUTD House Guardian (Housing Committee), SUTD Dance DerivativeZ

WORK EXPERIENCE

Azendian Solutions

Aug 2024 – Present

Full Stack Developer Intern

Singapore

- Developed responsive and interactive UIs for P&ID websites with ReactJS and designed REST APIs for a Keppel DHCS project using NodeJS and Express
- Automated sensor data migration with Python script, reducing migration time from 1 hour to 10 minutes per site improving efficiency and accuracy

PROJECTS & HACKATHONS

GIC CODETOIMPACT Hackathon

Sept 2024

- Led a team of five to build a full-stack MERN application in 24 hours for real-time data updates and concurrent processing using WebSocket and atomic operations
- Developed both backend and frontend, implementing REST APIs, JWT authentication, authorization, and interactive user interfaces
- Integrated AI-powered search with OpenAI GPT and NLP, enhancing search accuracy in MongoDB
- Deployed the app on AWS EC2 using Docker and GitHub Actions CI/CD pipelines

[HR Training Management Web App](#)

May 2024 – Aug 2024

50.003 Elements of Software Construction, SUTD

- Led development of an HR training app using React, Node.js, Express.js, and MySQL to automate tasks.
- Achieved 85% test coverage with 133 unit, integration, and end-to-end tests using Jest, Supertest, and Cypress to ensure system reliability and functionality
- Containerized the application with Docker and managed services using Docker Compose
- Enhanced code quality and maintainability with TypeScript and TailwindCSS

[E-commerce Bulk Buy Android Java App](#)

Jan 2024 – Apr 2024

50.001 Introduction to Information Systems & Programming, SUTD

- Developed a full-stack Android application using Java to streamline and optimise bulk-purchase process
- Applied Java and Object-Oriented Programming concepts and principles to develop app architecture
- Built an IoT smart locker with Raspberry Pi and Python, integrating QR code scanning from app for access
- Awarded 3rd place for Singtel InfoSys & Programming Awards and ISTD Outstanding InfoSys Project Award

[Electronic Game Utilising Custom CPU on FPGA](#)

Jan 2024 – Apr 2024

50.002 Computation Structures, SUTD

- Developed a digital version of Loopin' Louie using Beta CPU and assembly, a RISC-based CPU by MIT
- Implemented the custom CPU and its Instruction Set Architecture on a Xilinx Artix 7 FPGA using Lucid.
- Managed I/O unit connections to the FPGA, handling button presses and routing output to external LEDs and 7-segment displays using register-mapped I/O
- Awarded ISTD Outstanding Computation Structures Project Award in the cohort

SKILLS

- Programming Skills: Python, Javascript and Typescript (React, Node.js, Next.js), Java, C, MySQL, PostgreSQL, MongoDB, Docker, AWS, GitHub, Pandas
- Technical Skills: Machine Learning, Assembly, FPGA, Electronics, Fusion360, Adobe Creative Suite
- Fluent in English and Malay, basic in Mandarin