Brandon Ng Joon Hoe

brandonng2210@gmail.com | [Portfolio](#) | [GitHub](#) | [LinkedIn](#)

EDUCATION

Singapore University of Technology and Design **September 2022 - May 2026**
- Bachelor of Engineering (Computer Science and Design), Honours - Third Year Student
- GPA 4.5/5.0, Honours w/ Highest Distinction, ASEAN Undergraduate Scholarship, Honours List 22/23
- Teaching Assistant for Algorithms, Designing Energy Systems, and Design Thinking and Innovation

University of California, Davis - Exchange Program **January 2025 - March 2025**
- Coursework: Computer Networks, Programming Languages, Compilers, Human-Computer Interaction

WORK EXPERIENCE

Azendian Solutions **August 2024 – December 2024**
Full Stack Developer Intern *Singapore*
- Built 20+ analytical dashboards using React and integrating REST APIs with Node.js and Express
- Maintained a Next.js, PostgreSQL CMMS by debugging issues and creating documentation

EXTRACURRICULARS

AggieWorks **January 2025 – March 2025**
Software Engineer *California, USA*
- Designed a scalable backend from scratch in Go with Gin, PostgreSQL using Hexagonal Architecture
- Implemented RESTful APIs with JWT auth and CI workflows with Docker and GitHub Actions for testing
- Collaborated with PMs, engineers, and designers to deliver a mentoring app for UC Davis students

PROJECTS & HACKATHONS

[EShopMicroservices](#) **October 2024 – December 2024**
- Developed a backend microservices e-commerce platform using .NET 8, RabbitMQ, Redis caching, and Yarp API Gateway, containerized using Docker and Docker Compose
- Applied Domain-Driven Design (DDD), Command Query Responsibility Segregation (CQRS), and gRPC

GIC CODETOIMPACT Hackathon **September 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
- Engineered both backend and frontend, implementing REST APIs, JWT authentication and authorization

[HR Training Management Web App](#) **May 2024 – August 2024**
50.003 Elements of Software Construction, SUTD
- Led development of an HR training app using React (TypeScript), Node.js, Express.js, and MySQL
- Attained 85% test coverage with 133 unit, integration, and end-to-end tests using Jest, Supertest, Cypress

[E-commerce Bulk Buy Android Java App](#) **January 2024 – April 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

[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 button inputs and routed output to external displays via register-mapped I/O on FPGA.

SKILLS

- **Languages**: Python, Javascript, Typescript, Java, Go, C, C#, SQL, HTML, CSS
- **Frameworks & Libraries** : Gin, Flask, React, Node.js, Next.js, Express.js, .NET
- **Databases & Messaging**: PostgreSQL, MySQL, SQLite, MongoDB, Redis, RabbitMQ
- **Developer Tools & Platform**: Git, GitHub Actions, Docker, Linux