

Fadhel Erlangga Wibawanto

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EDUCATION

Bachelors of Science, Computer Science, Singapore Management University

Aug 2022 — May 2026

- Asean Undergraduate Scholarship Recipient, On Track for Magna Cum Laude (GPA: 3.66/4.0)
- Relevant Coursework: Data Structures and Algorithms, Database Management, IT Solution Architecture

EXPERIENCE

SoftServe

May 2023 - Jul 2023

Research and Development Trainee

Singapore

- Researched the feasibility of implementation of Quantum algorithms in NISQ-era devices
- Implemented a hybrid Quantum-Classical machine learning model using hidden quantum layers to provide computational speedups for the calculation of Options Prices for esoteric options for banks. Used PyTorch and IBM Labs for quantum circuit simulation and model training, WandB for logging as well as grid search for hyperparameter tuning.

L3velUp Labs

May 2023 - September 2023

Frontend Developer

Singapore

- Developed the frontend of a concert seat selector for startup project using NEXT.JS and TailwindCSS, implementing dynamic seats
- Integrated Stripe into custom checkout flows, with webhooks for event listeners and polling endpoints to trigger RPC calls to other microservices.
- Implemented Redux and migrated to Jotai for app-wide state management
- React Testing Library and Jest for frontend unit testing

RoboCupJunior Rescue Simulation

2018

World Champion

Various, (On-Site)

- Won Singapore nationals in 2018 and proceeded to represent Singapore internationally at Montreal (2018), attaining team 1st place internationally.
- Developed, with Python and C path-finding virtual and physical robots in a simulated environment under heavy time constraints.
- Implemented and applied programming concepts, such as Dijkstra, and later on A* for path-finding.

PROJECTS AND HACKATHONS

2023

SMU Ellipsis Tech Series (Finalists)

- Developed a mobile application to gamify community involvement. Developed the frontend with React Native and Tailwind. Developed backend with ExpressJs and Firestore for database. Backend executed via Firebase Cloud Functions.

TicketPulse - Performant Concert Ticket Booking Platform

2023

Coursework - Collaborative Software Development (A+)

- Awarded CS203 Outstanding Project Award
- Built backend with microservice architecture. Implemented gRPC for inter-service communications for performance advantage over REST. Dynamic frontend with responsive seat design akin to stadium built with NextJS. Integrated custom Stripe checkout with webhooks and remote service calls. Services built with both Typescript and Go. Persistence layers built with Prisma ORM.
- Adopted the SCRUM Agile methodology and other best practices such as unit and integration testing

SKILLS

Programming Languages	Java, C, Python, JavaScript, TypeScript, SQL
Frameworks	Express.js, NextJS, React, Jest, React Testing Library, React
Technologies	MySQL, PostgreSQL, Git, Docker, MongoDB, Stripe, gRPC, EC2, pyTorch, Pandas, ThreeJs
Skills	Object Oriented Programming, Project Management (Agile, Waterfall)

AWARDS

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| • CS203 - Collaborative Software Development — Outstanding Project Award | Dec 2023 |
| • SMU Ellipsis Tech Series — Finalists | Mar 2023 |
| • RoboCup Montreal — Winners | 2018 |