

JOSHUA NEE

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SKILLS

Programming: Golang, Java, Python, C++
Database: PostgreSQL, MySQL, MongoDB
DevOps: AWS, Docker, Grafana, Kafka

EDUCATION

Carnegie Mellon University - Silicon Valley, MS (Software Engineering) **Aug 2025 – Present**

- Expected Graduation: December 2026
- Current Course Work: Foundations of Software Engineering, Foundations of Computer Systems, Introduction to Machine Learning for Engineers

National University of Singapore, BEng (Computer Engineering) **Aug 2021 – Jan 2025**

- Honours (Highest Distinction), GPA: 4.86 / 5.0
- Course Work: Programming Methodology (A+), Data Structures and Algorithms (A), Software Engineering & Object-Oriented Programming (A-), Design and Analysis of Algorithms (Audit), Introduction to Artificial Intelligence (A+), Introduction to Machine Learning (A), CEG Capstone Project (A+)
- NUS Overseas Colleges (NOC) New York, Top 5% of Academic Year 2023/2024 Semester 2 & Academic Year 2024/2025 Semester 1 (Deans' List)

WORK EXPERIENCE

Shopee, Software Engineer (Singapore) **Jan 2025 – July 2025**

- Engineered backend services for core e-commerce and payment flows, directly client-facing for both buyers and sellers, processing tens of thousands of daily regional and international transactions utilizing Kafka and MySQL.
- Spearheaded migration of a monolithic codebase with 7 Golang microservices to a new internal library management system, removing over 100,000 lines of legacy code and validating system load using Grafana.
- Owned an internal notification microservice managing recipient groups and message dispatch with zero production downtime during active development.

Aggregate Asset Management, Software Engineer (Singapore) **Aug 2024 – Nov 2024**

- Optimized algorithmic trading strategies using Python by analyzing S&P 500 and global market data, conducting market trend analysis, backtesting models, and improving performance through risk-adjusted enhancements.

National University of Singapore, Teaching Assistant (Singapore) **Aug 2022 – Nov 2024**

- Conducted tutorials for over 60 students across multiple modules, including [Data Structures and Algorithms](#), [Software Engineering & Object-Oriented Programming](#), and [Introduction to Machine Learning](#); responsibilities included designing course materials, creating and presenting tutorial content, and weekly consultation services.

InTune Auto, Software Engineer (New York) **Dec 2022 – Dec 2023**

- Engineered 9+ major features, including digital authorization flows, automated service reminders, appointment scheduling, AWS EC2 image attachments, and integrations with Twilio SMS, Gmail, and OpenAI.
- Overhauled QA systems by repairing over 50% of failing Cypress frontend tests and achieving 90%+ coverage of backend endpoints via JUnit, improving reliability and development velocity.
- Developed full-stack features using TypeScript, React, Eclipse Jersey, jOOQ, and PostgreSQL, while deploying and monitoring services on Heroku, Netlify, and AWS (ECS, ECR) with Docker and DataDog.

Solutions16, Software Engineer (Singapore) **Sep 2022 – Jan 2023**

- Devised an end-to-end monitoring system using MosquittoMQTT, DigitalOcean, LilyGO SIM7600, and ESP32, integrated with Blynk and MongoDB to collect over 200,000 data points.
- Implemented just-in-time alerts for WhatsApp and Telegram via Meta for Developers and BotFather, averting 2 instances of severe property damage from pump room leaks.
- Automated email notifications using the Blynk IoT platform, eliminating manual 8-hour updates.

PROJECTS

Blockchain – [ETHGlobal Bangkok](#) & [ETHGlobal Singapore](#) **Sep 2024 – Nov 2024**

- Won 3rd place among 309 projects in Worldcoin's Best Use of World ID track at ETHGlobal Singapore by developing ZkScholar, a decentralized app for private financial aid applications using zk-SNARKs, collaborating in a team of three.
- Secured runner-up in the Real-World Impact: Best Social Good Application track at ETHGlobal Bangkok (2,750+ developers) with DocuEarn, a privacy-focused dApp enabling passive income from health data using ZK proofs.