

Joshua Nee

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EDUCATION

Carnegie Mellon University

Aug 2025 – Dec 2026

Master of Science (M.S.) in Software Engineering

- QPA: 4.0 / 4.0

National University of Singapore

Aug 2021 – Jan 2025

Bachelor of Engineering (B.Eng.) in Computer Engineering

- GPA: 3.9 / 4.0, Top 5% of Academic Year 2023/2024 Sem 2 & Academic Year 2024/2025 Sem 1 (Deans' List)
- Teaching Assistant: Data Structures & Algorithms, Software Engineering & OOP, Machine Learning

PROFESSIONAL EXPERIENCE

Shopee

Jan 2025 – Jul 2025

Backend Software Engineer

Singapore

- Developed e-commerce and payment systems with Kafka/MySQL, processing **10K+ daily transactions**
- Spearheaded migration of legacy Golang microservices, **cutting tech debt by 20%** through modular refactor
- Restored notification microservice deployability **for 100+ users within 2 weeks** by redesigning release workflows
- Engineered nationwide features with blacklist/whitelist logic and redirect fixes, supporting 100K+ user requests
- Commenced role after early graduation; concluded tenure upon Master's program admission

ST Engineering

May 2024 – Aug 2024

Software Engineering Intern

Singapore

- Designed 3D interactions and live geo-tracking in Swift by reverse-engineering undocumented VisionOS behaviors
- Architected reusable mixed reality components, reducing future integration time by 30%
- Prototyped Apple Vision Pro applications **within 3 months** of US launch, preceding Singapore release by 2 months

InTune Auto

Dec 2022 – Dec 2023

Full-Stack Software Engineer

New York, NY

- **Reduced data retrieval latency by 80%** by redesigning pagination and query architecture
- Innovated custom scheduling platform to improve enterprise booking efficiency with advanced availability logic
- Gathered and defined client requirements to ship features weekly, maintaining 99% customer retention
- Collaborated in a 4-engineer startup team using React, Java, and PostgreSQL following Scrumban methodology
- Drove strategic acquisition by Highland Creek Partners through full-stack engineering enabling **2x user growth**

PROJECTS & HACKATHONS

A New Agent Hackathon | LLM Agents

Oct 2025 – Oct 2025

- Won Vapi Track (200+ builders) for a tool-using LLM scheduling agent with multimodal (text + voice) dialogue
- Integrated ClinicalTrials.gov-grounded dialogues with Google Calendar and Supabase Edge for intelligent timetabling

Computer Engineering Capstone Project | Machine Learning

Aug 2024 – Nov 2024

- Built real-time gesture recognition system using multi-layer perceptron in TensorFlow, achieving **>95% accuracy**
- Devised feature extraction pipeline using statistical and spectral metrics optimized with SHAP analysis
- Enhanced model robustness via time-series data augmentation and hyperband-based hyperparameter tuning

ETHGlobal Bangkok & ETHGlobal Singapore Hackathons | Blockchain

Sep 2024 & Nov 2024

- **Runner-up** at ETHGlobal BKK Social Good track (2,750+ developers) with a Next.js frontend featuring World ID authentication and blockchain integration via ethers.js and Protokit
- Won **3rd place** (out of 309 projects) at ETHGlobal SG Worldcoin track for building a React frontend with Web3Auth for blockchain access, integrating Privado ID for cryptographic credentials, and Sign Protocol for data authenticity

TECHNICAL SKILLS

Languages & Frameworks: Python, Go, Java, TypeScript, C++, React, Next.js, Express.js, gRPC/REST, Protobuf
Databases & Communications: PostgreSQL, MySQL, MongoDB, Firebase, Redis, WebSocket, MQTT, Apache Kafka
Cloud & DevOps: AWS (EC2, S3, Lambda), Docker, Kubernetes, NGINX, Grafana, Prometheus
AI/LLM: TensorFlow, PyTorch, LangChain, MCP, Agents, RAG (vector stores, embeddings)
Developer Tools & Productivity: Git, CI/CD Pipeline, Copilot, Codex