

Duy Nguyen

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Education

National University of Singapore, B.Comp. in Computer Science – Singapore Aug 2022 – present

- GPA: 4.84/5.00 ([Transcript](#)), concentrated in Algorithms & Theory and Artificial Intelligence
- Top Students for Discrete Structures, Data Structures and Algorithms, Programming Methodology, Software Engineering, Design and Analysis of Algorithms, Operating Systems, Competitive Programming

National University of Singapore, B.Sc. in Data Science and Analytics – Singapore Aug 2022 – present

- GPA: 4.90/5.00 ([Transcript](#)), concentrated in Operations Research, minored in Quantitative Finance

Experience

Software Engineer Intern, AI Centre for Educational Technologies – Singapore May 2025 – Aug 2025

TypeScript, React, Material UI, Tailwind CSS, Ruby on Rails, PostgreSQL, OpenAI API

- Enhanced [Coursemology](#), an open-source gamified LMS used by thousands of students and instructors
- Integrated AI-assisted grading and programming plagiarism services, enabling automated rubric feedback and similarity scans to enhance grading consistency and reduce manual workload for instructors

Algorithm Engineer Intern, Vilota – Singapore May 2024 – Aug 2024

C++, Python, Linux, OpenCL

- Integrated AprilTag 3 to accelerate fiducial marker detection, achieving 6x faster camera calibration
- Implemented real-time panorama generation algorithm with parallel processing on i.MX 8M Plus Processors

Software Engineer Intern, Computing for Voluntary Welfare Organisations – Singapore May 2023 – Aug 2023

TypeScript, React, Material UI, Golang, PostgreSQL

- Built admin dashboard for a multi-tenancy management system used by 400+ social workers in 11 Active-Aging Centres
- Built low-code tool for custom reports, reducing developing time for new client requirements from days to hours

Projects

PeerPrep Interview Platform Sep 2025 – Nov 2025

JavaScript, Node.js, MongoDB, Google Cloud Platform (GCP)

- Architected a scalable serverless microservices infrastructure on GCP with Infrastructure as Code (IaC) using Terraform
- Engineered a collaboration service using WebSockets and CRDTs (Yjs) for conflict-free, real-time shared code editing

PayDay Digital Wallet Aug 2023

JavaScript, React Native, Node.js, Firebase, Stripe API

- Developed a mobile e-wallet with email OTP verification, guardian notification, and risk evaluation features
- Attained top 12 finalist teams at Tiktok Hackathon Challenge 2023

Address Element Extraction Mar 2021

Python, Pytorch, Transformers

- Fine-tuned a named-entity recognition model to extract street names from Indonesia addresses given by Shopee users
- Attained 1st place out of 1,000+ teams in the Data Science Challenge of Shopee Code League 2021

Skills

Full Stack Development: Frontend (React, Material UI, Tailwind CSS), Backend (Node.js, Golang, Ruby on Rails, FastAPI), Database (PostgreSQL, MongoDB, Redis), DevOps (Linux, Git, Docker, CI/CD, Terraform, AWS, GCP)

Data Science: Programming (R, Python), Frameworks (PyTorch, Transformers), Tools (Weights & Biases, Jupyter, LaTeX)

Awards

- **Finalists** for various CTF events: DSTA Brainhack CDDC, GovTech Singapore AI CTF, NUS Greyhats Grey Cat The Flag
- **First Prize** for Computing Track at Huawei ICT Competition Asia Pacific 2023-2024
- **3rd Place** for APAC Terminal Fall 2023 — AI tower defense programming competition by Correlation One & Citadel
- **Silver Awards** for National Olympiad in Informatics (2019–2021) and Singapore Mathematical Olympiad (2020–2021)