

# Duy Nguyen

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## Education

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**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

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**AI Centre for Educational Technologies**, Software Engineer Intern – 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

**Vilota**, Algorithm Engineer Intern – 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

**Computing for Voluntary Welfare Organisations**, Software Engineer Intern – 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

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**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

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**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

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- **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)