

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 , Vilita – 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)