

# HO DO MINH QUAN

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Fullstack Engineer with expertise in developing scalable educational platforms, automation systems, and data analytics solutions. Combines software development with data analysis and mentoring experience, delivering actionable insights while optimising operational processes.

## PROJECTS

### DISCORD AI TEACHING ASSISTANT | OpenAI, ChromaDB, Discord.py

[Link](#)

- Developed an AI-powered teaching assistant integrating OpenAI GPT models with Discord's interactive features for intelligent, context-aware responses across 5 major courses with 100% positive feedback.
- Built an advanced code and visual analysis engine with GitHub integration to automatically extract, analyze, and provide feedback on code submissions in multiple programming languages, including image debugging for visualization errors.
- Implemented a knowledge retrieval system with vector database integration, delivering curated learning materials through real-time searches of YouTube content and local documents. Successfully resolves 90% of forum threads monthly, significantly reducing teaching staff workload.

### ONLINE ASSESSMENT PLATFORM | Next.js, ShadcnUI, FastAPI, PostgreSQL, AWS S3

[Link](#)

- Designed and developed a comprehensive online examination platform for CoderSchool courses, supporting multiple-choice assessments and coding problems with live code execution capabilities, serving 200+ students across multiple cohorts.
- Built a scalable architecture with Next.js frontend, FastAPI backend, and AWS S3 integration for exam content management, featuring automated S3 synchronization via GitHub Actions for seamless content deployment and version control.
- Implemented an advanced autograding system with real-time code execution and validation using Python/SQL sandboxing, reducing TA marking workload by 80% while providing immediate feedback through WebSocket notifications and analytics dashboard.

### JOB BOARD AUTOMATION | Langchain, BeautifulSoup, Pydantic, Github Actions

[Link](#)

- Developed an automated job scraping and intelligent filtering platform with multi-platform capabilities, extracting job listings from LinkedIn, TopCV, and ITviec with robust error handling and rate limiting while using AI models to evaluate job relevance and assign suitability scores based on candidate profiles.
- Integrated cron job scheduling with automated pipeline orchestration, successfully gathering 100+ targeted job postings per week across five Discord servers with 95% accuracy in relevance scoring and 40% higher application rates among graduates.

## EXPERIENCE

### CODERSCHOOL

Ho Chi Minh, Vietnam

#### Automation Engineer

Oct 2024 – Present

- Architected and deployed data pipelines and automation workflows for learner management and stakeholder reporting, implementing ETL processes that aggregate data from multiple sources and deliver monthly operation key metrics. Leveraged statistical analysis and data visualization techniques to track learner progress and identify at-risk students while automating manual processes, reducing reporting time by 90% and managing 500+ students across 5 major courses.

#### Teaching Associate

Nov 2023 – Present

- Provide comprehensive knowledge across multiple domains in data science and computer science, guiding learners towards deeper understanding of the field and career path selection. Successfully supported 20+ learners to graduate with high results and secure immediate job offers, including mentoring 5 students who received CS50P certificates.
- Managed content delivery and curriculum oversight for Data Science and Data Analysis Express courses, ensuring course materials remain current with industry standards and learning objectives align with career readiness requirements.

### GOOGLE DEVELOPER STUDENT CLUB

Ho Chi Minh, Vietnam - Melbourne, Australia

#### Operations Officer

Oct 2020 – Present

- Organized technical events and workshops on Google technology for club members and the local community.
- Collaboration with cross-functional teams to deliver highly engaging and informative events.
- Utilized extensive networking skills and industry connections to invite relevant guest speakers, resulting in increased attendance and engagement throughout.

## EDUCATION

### MONASH UNIVERSITY

Melbourne, Australia

#### Master of Data Science

Jul 2024 – Jun 2026

Specialisation in Applied Data Analysis | GPA: Distinction

Relevant Coursework: Advanced Data Analysis, Data Wrangling, Data Processing for Big Data

#### Bachelor of Computer Science

Mar 2021 – Jun 2024

Specialisation in Data Science and Software Development | GPA: Distinction

Relevant Coursework: Software Engineering, Data Warehouse and Business Intelligence, Theory of Computation

## SKILLS

**Languages:** Python, TypeScript, SQL, R, HTML/CSS

**Data Science & Engineering:** Pandas, NumPy, Scikit-learn, PyTorch, Langchain, PySpark, Airflow, AWS (S3, EC2, Lambda)

**Software Development:** React, Next.js, FastAPI, Streamlit, Tailwind CSS, Shadcn UI, PostgreSQL, MongoDB, Docker, Git

**Soft Skills:** Project Management, Process Optimisation, Collaboration, Teaching & Mentoring