

# Cao Minh Nguyen

minhnc2005@gmail.com | [linkedin.com/in/caominh-nguyen](https://www.linkedin.com/in/caominh-nguyen) | Delft, NL

Final-year Computer Science student with strong foundations in algorithms, data analytics, and backend development. Experienced in building scalable APIs, data pipelines, and full-stack applications through multiple software engineering internships. Proficient in Java, Python, TypeScript and SQL, with experience using PostgreSQL, Docker, and AWS to build production systems.

## EDUCATION

### Delft University of Technology

BSc. Computer Science and Engineering

Delft, NL

Sep 2023 – present

- **GPA:** 8.56/10
- **Teaching Assistant:** Big Data Processing (CSE2520)

## EXPERIENCE

### FPT Software

Software Engineering Intern

Remote

Jun – Sep 2025

- Developed a cross-platform voice analysis mobile app using Flutter and **AWS, processing and analyzing user speech data** to deliver real-time feedback.
- Designed an end-to-end **speech data processing pipeline** integrating Amazon Transcribe and Amazon Comprehend, transforming raw audio into analytical outputs with **<4s latency**.
- Led the implementation of **secure user authentication** using Amazon Cognito and Amazon API Gateway.
  - Developed **7+ authentication-related API endpoints** and implemented secure JWT token storage within the Flutter client. Achieved **100% successful access token renewal** during testing.
  - Designed authentication and account management UI flows in Flutter.

### Dizconto

Software Engineer Intern

Remote

May – Oct 2025

- Took ownership of **~75% of a new backend system** for the company's ticket-selling platform using **NestJS (Node.js), TypeScript, and PostgreSQL**, reducing backend codebase size by **~30%** compared to the legacy Django system.
- Implemented backend authentication using Keycloak, running the service via **Docker** for local development and integration testing.
- Resolved **10+ user-reported bugs** and improved partner onboarding UX, reducing registration time by **~20%**.

### Rotterdamse Elektrische Tram (RET)

Software Engineer Intern

Rotterdam, NL

Apr – Jun 2025

- Developed a **full-stack web-based dashboard** for process managers to visualize **100+ business processes** and their interdependencies using a graph-based interface, improving process traceability by **~40%**.
- Built scalable backend services with **Java Spring Boot** and **PostgreSQL**, delivering **20+ APIs** with **<250 ms latency**.
- Designed reusable **React.js components** for data visualization and interactive graph exploration.
- Collaborated with non-technical stakeholders to **translate business requirements** into technical features and iteratively improve system usability.

## PROJECTS

### Hackathon 6.0 bunq AI Agents

24-hour Hackathon powered by NVIDIA & AWS

- Built a fun AI-powered feature for the bunq banking platform that visualizes a user's financial status by dynamically changing an avatar's facial expression based on bunq account balance.
- Link: [Devpost](#)

### Airbnb Amsterdam Price Prediction

Python | Scikit-learn | Pandas

- Built a **machine learning pipeline in Python** to analyze **~10,500** Amsterdam Airbnb listings, identifying key pricing drivers including location, room type, and property size.
- Performed data cleaning on 20+ features and encoded categorical variables for training data.
- Trained and tuned **Random Forest regression model** using validation-based grid search.

- Achieved **~€58 MAE**, **23% MAPE**, and  **$R^2 = 0.67$**  on unseen test data.
- Link: [GitHub](#)

### Full-stack Computer Science Revision Platform

TypeScript | Next.js

- Built a full-stack web application with Next.js that enables A-Level students to quickly search and access computer science revision resources.
- Implemented **authentication with OAuth (Google & GitHub)** and user accounts with progress tracking.
- Link: [Website](#), [GitHub](#)

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## TECHNICAL SKILLS

**Languages:** Java, Python, JavaScript, TypeScript, SQL

**Frameworks & Libraries:**

- **Backend:** Java Spring Boot, NestJS, Node.js
- **Frontend:** React.js, Next.js, Tailwind CSS
- **Data & ML:** Pandas, NumPy, Scikit-learn, Seaborn

**Databases:** PostgreSQL, DynamoDB

**Infrastructure & Tools:** Docker, AWS (Lambda, API Gateway, Cognito), Git, GitHub, GitLab