Jimmy Oei

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Education

Delft University of Technology
Delft, Netherlands

MSc Computer Science — CGPA 8.3/10
Sep 2025 – Aug 2027 (expected)

- **Joint Interdisciplinary Project** —Fine-tuned a state-of-the-art segmentation model to delineate Ghanaian smallholder farm fields, raising F1 from 0.173 to 0.246 and cutting delineation costs from €5.00 to €2.18 per hectare.
- **DSZ Wave (Swim & Triathlon Association)** — Treasurer for activities committee and racing in one of its triathlon division teams.

Leiden University
Leiden, Netherlands

BSc Computer Science, Cum Laude — CGPA 8.3/10
Sep 2020 – Aug 2023

- **Teaching Assistant** — Taught and graded C++ coursework for ∼250 first-year Computer Science students in the course Programming Methodology.
- **Thesis: Automated Dynamic Analysis of Java Proof-of-Concepts (8.5)** — Developed a Python/QEMU system for dynamically analyzing potentially malicious Java PoCs from GitHub.
- **PLNT Students (Entrepreneurship Association)** — Worked on several startup ideas and competed twice in its Impact Hackathons.

Work Experience

NN Group
The Hague, Netherlands

Software Engineer
Sep 2023 – Oct 2026

- **Maker Portal** — Migrated NN's central engineering documentation platform (2,000+ monthly active users) from a static serverless app to a containerized app, cutting average documentation publish latency from 1–2 hours to 5 minutes.
- **Zelda Internal Developer Platform** — Engineer on NN's Backstage-based developer platform for 4,000+ engineers (TypeScript, Python, Kubernetes, AWS); built its documentation integration.
- **YIP Accelerate Programme** — Selected for a 6-month development programme focused on project management, technical expertise and leadership; recognized as the top-performing participant.

Projects

Nasdaq ITCH 5.0 Order Book
C++

github.com/JimmyOei/order_book

- Parses a full trading day of raw Nasdaq TotalView-ITCH 5.0 data (∼8 GB, ∼268M messages) and rebuilds the limit order book for all ∼8,000 symbols.
- Custom open-addressing order table (linear probing, backward-shift deletion) and cache-friendly sorted-vector price levels; correctness verified against an independent reference implementation and runtime invariant audits.

Chess Engine
C++, SDL2

github.com/JimmyOei/chess_game

- Mailbox board with one-byte piece encoding; game rules verified with perft against published reference counts.
- Minimax engine with alpha-beta pruning, MVV-LVA move ordering and iterative deepening under a 3 s time budget.

Python-Markdown List Extension
Python

github.com/JimmyOei/mdx_better_lists

- Open-source Python-Markdown extension, published on PyPI and used in NN's documentation platform (2,000+ users), that fixes several Markdown list-parsing quirks.
- Built test-first, with 95% test coverage (Codecov) and CI on GitHub Actions.