

Kieran van der Heijde

Python Engineer

Veldhoven

kieran@kcvdh.com kcvdh.com [LinkedIn](#) [GitHub](#)

SUMMARY

Python Engineer at ASML, the semiconductor lithography company, building internal Python and JavaScript tools used across multiple business units. Sole engineer behind two live products: PeekSeek, a competitive gaming platform with 2,000+ users, and AlgoStudio, a platform for teaching programming in the classroom. Full-stack Python with FastAPI and Flask on PostgreSQL, Docker, and Linux. Supervises interns at ASML, built AlgoStudio for classrooms, and has coached swimming as a volunteer since 2021. Studying BSc Communication & Information Sciences at Tilburg University.

SKILLS

Languages: Python, SQL, JavaScript, C#, Rust, HTML/CSS

Backend: FastAPI, Flask, SQLAlchemy, Pydantic, REST APIs, Jinja2, HTMX

Data: PostgreSQL, pandas, NumPy, Metabase, native SQL

Infrastructure: Docker, Linux, Traefik, Git, CI/CD, self-hosted deployment

Testing & practice: pytest, unit testing, mutation testing, code review, type hints

Mentoring & teaching: intern supervision, curriculum and problem design

EXPERIENCE

ASML, Veldhoven, Netherlands, Feb 2025 - Present

Python Engineer, Nov 2025 - Present

- Build and extend internal Python and JavaScript tools used across multiple business units, turning complex requirements into software other engineers can maintain without me.
- Supervised an engineering intern through a graduation project that finished with a final grade of 10.

Automation Developer, Feb 2025 - Nov 2025

- Replaced manual spreadsheet processes with Python automation, then took on a series of development projects for the team.

PROJECTS

PeekSeek, creator and sole engineer, peekseek.net

The first competitive scene for Unturned, officially partnered with Smartly Dressed Games, the studio behind the game. Non-profit ranked platform with skill-based matchmaking and the community's largest tournaments: 2,000+ users and 10,000+ matches played.

- Built the analytics layer in Metabase over PostgreSQL, writing native SQL for match-fixing detection, player co-occurrence, and account-linkage analysis.

AlgoStudio, sole engineer, algotstudio.io

A platform for teaching computer science, built for the classroom. Students write Python or C# on one screen and run it sandboxed in Docker, kept fast with a warm container pool, with live per-test feedback. An AI assistant lets teachers generate problems and test cases; ships with a VS Code extension. FastAPI and Flask on PostgreSQL, with Jinja2 and HTMX.

Angelo, creator, github.com/kvandeh/Angelo

Mutation testing for Python, written in Rust: Angelo rewrites the code under test and reports which mutants the test suite fails to catch, finding the gaps line coverage hides. Batch mutation, coverage-based test selection, and warm pytest workers take a synthetic 200-mutant benchmark with a two-second suite from 48.1s to 4.5s at an identical

mutation score. Ships as a single binary and reports into CI and SonarQube through the mutation-testing-report schema.

VOLUNTEER & ADDITIONAL EXPERIENCE

Swim Instructor & Coach

Helmondse Watervrienden, Helmond, Netherlands, Feb 2021 - Present

Teach and coach swimming as a volunteer, working with swimmers of all ages.

Lifeguard

Optisport, Helmond, Netherlands, Nov 2023 - May 2024

Lifeguarding and customer service.

EDUCATION

BSc Communication & Information Sciences

Tilburg University, Tilburg, Netherlands, Sep 2026 - Expected 2029

HAVO, Natuur & Techniek and Natuur & Gezondheid (bilingual)

Jan van Brabant College, Helmond, Netherlands, 2024

CERTIFICATIONS

Cambridge IGCSE English, University of Cambridge, 2024

LANGUAGES

Dutch (native) and English (bilingual secondary education, Cambridge IGCSE certified).