

TIES PETERSEN

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EXPERIENCE

Research Intern

Jan. 2026 – Present

Eindhoven University of Technology

Eindhoven, The Netherlands

- Analyzing real-world runtime performance of discrete Fréchet matching algorithms.
- Implementing algorithms in C++ for precise, low-overhead performance evaluation.

Climbing Trainer

Nov. 2023 – Aug. 2025

Monk Bouldergym

Eindhoven, The Netherlands

- Provided personal training to climbers, supporting them in their growth and athletic development.
- Taught courses for climbers on topics such as climbing technique, strength and strategy.

UPCOMING

Software Engineering Intern

Aug. 2026 – Nov. 2026

Air Space Intelligence

Gdańsk, Poland

- Successfully navigated a multi-stage technical interview process, including an on-site evaluation in Gdańsk.
- Air Space Intelligence develops airspace optimization platforms used by major US airlines and the US Department of Defense.

PROJECTS

Order Book Matching Engine (GitHub)

Dec. 2025 – Feb. 2026

- Developed a matching engine in C++20 to process limit, market and cancel orders efficiently.
- Optimized matching logic to achieve sub-microsecond execution (P50: 144ns, P99: 401ns) and throughput of over 5.1M orders per second.
- Benchmarked the matching engine by simulating realistic market microstructure using various distributions.
- Integrated software engineering tools such as CMake, CTest, Clang-Tidy and Clang-Format.

LOCO Digital Scoring System (for Monk Bouldergym)

Feb. 2025 – Oct. 2025

- Mobile-first platform for climbing competitions, using React, Next.js and Supabase.
- Replaced paper scorecards with digital logging, real-time rankings, and one-click result exports.
- Sped up the ranking process from taking 1 - 2 weeks to just a few seconds.

EDUCATION

Eindhoven University of Technology

Eindhoven, The Netherlands

Bachelor of Science, Computer Science and Engineering

2023 – 2027

- Current GPA: 8.8 (out of 10)
- Course highlights: Data Structures, Algorithms, Heuristic Algorithms, Algorithms Engineering, Statistics and Machine Learning
- Project highlights:
 - * VR game exploring the history of the TU/e Gaslab building. Responsible for the LLM-powered AI assistant. In collaboration with the EAISI Digital Twins Lab.
 - * Police demand forecasting system combining SARIMAX time-series modeling and computer vision analysis of 60,000+ satellite images. Responsible for data preparation and training the SARIMAX model.

Lorentz Casimir Lyceum

Eindhoven, The Netherlands

VWO (Pre-university education)

2017 – 2023

- Profile: Nature & Technology
- Cum Laude distinction

AWARDS & ACHIEVEMENTS

1st place in 2 heuristic optimization challenges

Challenges were part of the Heuristic Algorithms course, Eindhoven University of Technology (2025)

National Dutch Bouldering Championships

I'm also a highly competitive boulderer: placing 5th in the Youth division (2025), and 25th in the Men's division (2026)