



Mathijs Henquet

Software Engineer · Amsterdam, NL

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Engineer with a dual CS/Math background who takes ideas from pitch to production. At NLR, I built and drove adoption of SKY (generative AI platform, €800k+/yr gains) and SENTINEL (military voice assistant, adopted by Dutch MOD). MIRI 2019 Fellow.

EXPERIENCE

R&D Engineer, AI team

2023–2026

NLR — Royal Netherlands Aerospace Centre, Amsterdam

- **SKY** — Built NLR’s generative AI platform for classified data. €800k+/yr in measured productivity gains. *.NET C#, gRPC, Python, RAG, TensorRT-LLM, Docker, Rust*
- **SENTINEL** — Led development of real-time voice assistant for military situational awareness. Adopted by Dutch Ministry of Defence. *Python, Whisper, WebRTC, vLLM, VLM/LLM, TTS (Kokoro)*
- **Mesh-as-a-Service** — Automated 3D modeling via neural reconstruction. Runner-up Best Paper at I/ITSEC 2024.
- **Flight Debrief Study** — Led strategic study on automated flight debriefing summarization. Published at ICCAS 2024.

AWARDS & FELLOWSHIPS

- **Runner-up NLR Team Innovation Award** (2025) — SKY team, nominated among organization-wide finalists (among ~1000 employees)
- **Runner-up Best Paper** (2024) — Simulation subcommittee, I/ITSEC 2024 — for Mesh-as-a-Service
- **MIRI Summer Fellowship** (2019) — Academic retreat for mathematicians and programmers working on AI alignment

PROJECTS

Correctness of Automatic Differentiation — Master’s thesis (on hold)

2022

Formal proof of correctness of automatic differentiation in the presence of recursion and iteration. Utrecht University, Mathematics.

Homotopical Mathematics [PDF](#) [↪](#) — Bachelor’s thesis, 9/10

2019

On homotopy type theory and its relation to higher topos theory. Utrecht University.

PUBLICATIONS

Henquet, Bellucci, Amghane, et al. “[Mesh-as-a-Service: Automated 3D Modelling fast as l-AI-ghtning](#).” [↪ I/ITSEC 2024. Runner-up Best Paper, Simulation subcommittee.](#)

Henquet, Bellucci. “[AI-Assisted Debrief: Automated Flight Debriefing Summarization and Competency Assessment](#).” [↪ ICCAS 2024.](#)

Hellinga, **Henquet**, Bellucci. “SENTINEL: Supporting Military Situation Understanding Through Conversational Vision-Language AI.” *ICMCIS 2026 (accepted for publication).*

EDUCATION

MSc Mathematics (on hold) — Utrecht University

2020–2022

BSc Computer Science, GPA 7.8/10 — Utrecht University

2015–2019

BSc Mathematics, GPA 7.8/10, thesis 9/10 — Utrecht University

2012–2019

TECHNICAL SKILLS & LANGUAGES

Languages: Rust, TypeScript/JavaScript, Python, C# (.NET), Haskell, SQL

Web: React, Node.js, HTML/CSS, Vite

AI/ML: LLM/VLM integration, RAG pipelines, latency optimization (TTS/STT/embedding models)

Infrastructure: Docker, Linux, PostgreSQL, MongoDB, Redis

Other: Security-compliant deployment, classified data handling, LaTeX, Mathematica

Languages: Dutch (native) · English (C2) · German (C1)