



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** — Pitched, designed and built NLR's locally hosted 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. Among 4% of Defence innovation projects adopted as standard capability. *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 the Mesh-as-a-Service paper
- **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 — 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)