

Anthony Meijer

AI & Systems Engineer. I build AI that has to be *right* about the physical world, and run it in production.

EXPERIENCE

Data Scientist · Software Engineer · Research Associate

Feb 2025 to Aug 2026

Centre for Climate Change and Environmental Health, NTU

- Sole designer, engineer and operator of 3DREAMS@SG, a real-time atmospheric-intelligence platform run in production 2025 to 2026: sensor ingestion, Python pipelines, Supabase/PostgreSQL backend, Next.js dashboard, conversational alerting agents.
- Wrote a least-squares Doppler-LiDAR wind-retrieval pipeline with batched upserts and SQLite-based deduplication and state tracking.
- Built Teams and Telegram agents around a transport-detection algorithm with calibrated episode-probability scoring and a PBL-breakthrough forecast.
- Built a traffic-emissions estimation system: vehicle detection from camera feeds driving a MOVES model, validated against reference-grade sensors.

Researcher

2022 to 2024

Singapore University of Technology & Design (SUTD)

- Led life-cycle and material-flow analyses for academic and industry-linked projects, including externally commissioned work.
- Published peer-reviewed research; presented at international conferences and ministerial events.

Data Science Programme (intensive)

2024

CoderSchool, Vietnam

- Built a PyTorch deep-learning model forecasting CO concentrations from satellite remote sensing: full pipeline from cleaning to evaluation.

Process Advisor

2018 to 2019

KplusV, Netherlands

- Advised public-sector and industry clients on sustainable urban development and circular economy.

3DREAMS@SG

Flagship · Designer · Sole engineer · Operator

Doppler-LiDAR from three sites fused with three more feeds on a ten-minute clock; two detection stages per window; proactive Teams/Telegram alerts forecasting haze breakthrough to street level. Handed over in full and still running; demonstrated to WHO at the forum CCEH co-hosted with WHO.

STACK

AI & ML

Python · PyTorch · scikit-learn · LLM agents · RAG · MCP · knowledge graphs

Backend & Data

FastAPI · PostgreSQL / Supabase · DuckDB · SQLite · real-time pipelines

Web & Visualization

Next.js · TypeScript · React · Three.js · Deck.GL · Mapbox · Plotly

Cloud & Automation

Vercel · Azure · Render · GitHub Actions · serverless & cron

Scientific

NumPy · SciPy · Xarray · signal processing · remote sensing · GIS

EDUCATION

MSc · Metropolitan Analysis, Design & Engineering

TU Delft / Wageningen UR (AMS Institute) · 2017–2019

BSc · Civil Engineering

HZ University of Applied Sciences · 2012–2017

LANGUAGES

Portuguese (native) · English (C1) · Dutch, Italian, Spanish (B1)

LINKS

anthonymeijer.dev

github.com/awvmeijer

linkedin.com/in/anthonymeijer