Dan Edelstein

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Professional Summary

Versatile AI Engineer and Researcher specializing in **Bayesian Machine Learning**, **NLP**, and **Deep Learning**. Combines a Cum Laude engineering background with advanced MSc expertise in probabilistic modeling and computational theory. Experienced in bridging the gap between rigorous research and production-grade MLOps, with a focus on scalable, data-intensive systems. International experience across Northern Europe (DTU, Aalto, TalTech) delivering high-performance software and published technical research.

Education

DTU (Technical University of Denmark) **Copenhagen, Denmark**
Honors MSc in Human-Centered Artificial Intelligence; GPA: 10.1/12 *Autumn 2024 - Spring 2026*

- **Relevant Coursework:** Bayesian Machine Learning, Advanced Deep Learning for Computer Vision, Learning Theory, Logical Theories for Uncertainty, Social Graphs
- **Projects:** Hierarchical user-interest modeling for news recommendation, Robust memorization-free diffusion models Demo

TalTech (Tallinna Tehnikaülikool) **Tallinn, Estonia**
BSc in Integrated Engineering, Cum Laude, GPA: 4.9/5 *Autumn 2021 - Summer 2024*

- **Thesis:** "Investigation into suitability of millimeter-wave radars for perception on a mobile robotics platform" - Grade: 5.0/5.0
- **Awards:** Cum Laude, XRP Ledger Trust Stipendium Grantee

Aalto University **Helsinki, Finland**
Erasmus, GPA: 4.9/5 *Autumn 2023 - Summer 2024*

- **Key Courses:** Autonomous Mobile Robotics (MSc), Smart Forestry Robotics (MSc)
- **Projects:** Touch-keyboard sidechannel attack: modeling touch input via inertial multivariate time series

Work Experience

Hafnium Investment **Copenhagen, Denmark**
AI Engineer (Internship) *Jan 2026 – Ongoing*

- Engineering high-performance, containerized microservices for semantic analysis and large-scale organization of unstructured data streams in production
- Developing Bayesian statistical models and embedding-based pipelines to improve signal detection and classification accuracy in automated workflows
- Building evaluation frameworks and benchmarking protocols to validate model performance and reliability against edge cases
- **Tech Stack:** Python, Docker, gRPC, NLP (Embeddings), Statistical Modeling, Asynchronous Systems

Logoteknia Oy **Helsinki, Finland**
NLP MLOps Engineer – Contract, Fully Remote *May 2025 - Ongoing*

- Architected a production MLOps evaluation platform on Azure to drive statistically robust, cost-aware selection of machine translation models.
- Instituted multi-batch evaluation methods leveraging **Bayesian inference** to quantitatively rank models, enabling optimal cost-per-quality routing.
- Engineered async microservices architecture (FastAPI, Celery) and integrated dynamic model resolution via Azure ML Registry.
- Implemented rigorous validation protocols for corpus construction to mitigate training set contamination from heterogeneous sources.
- **Tech Stack:** Python (FastAPI, PyMC), Azure (Container Apps, ML Workspace), PostgreSQL, Docker, MLflow.

TalTech Autonomous Vehicles Research Group **Tallinn, Estonia**
Perception Researcher (Signal Processing & Vision) *Feb 2024 - Aug 2024*

- Developed signal processing pipelines to integrate sparse radar data with traditional vision systems, improving detection robustness.
- **Tech Stack**: Python, C++, ROS, Sensor Fusion, Data Analysis

Ericsson **Tallinn, Estonia**
Test Development Digital Software Engineer *June 2022 - March 2023*

- Built full-stack internal tool adopted by 100+ engineers for daily use
- Automated testing and CI/CD processes, cutting test execution time by 12%.
- **Tech Stack**: C#, Next.js, PostgreSQL, MSSQL, Internal Tooling

Teaching

Deep Learning **Copenhagen, Denmark**
MSc Teaching Assistant *Sep 2025 - Dec 2025*

- 4 hours/week of in-person teaching for Deep Learning MSc course

Quantitative Sustainability 1210X **Copenhagen, Denmark**
MSc Teaching Assistant *Jan 2025 - May 2025*

- 8 hours/week of in-person teaching for sustainability-focused data modeling MSc course

Facilitating Innovation in Multidisciplinary Teams **Copenhagen, Denmark**
Engineering Team Project Manager *June 2025*

- Intensive course on guiding and coordinating engineering teams in the Agile model

Publications

Sensor Test Bench for Autonomous Vehicle Engineering Education
Baltic Mechatronics Symposium 2024
***Dan Edelstein**, Joona Päivärinne, Pyry Weckman, Oskari Jutila, et al.*

Millimeter-Wave Radar Applications in Autonomous Object Detection
Baltic Electronics Conference 2024
*Toomas Tahves, **Dan Edelstein**, Mauro Bellone, Raivo Sell*

Technical Skills

- **Programming Languages & Frameworks**
  - **AI & Data Science**: Python (PyTorch, NumPy, Pandas, JAX, OpenCV, networkx)
  - **Backend & MLOps**: gRPC, FastAPI, Celery, Pydantic, Docker, MLflow, PostgreSQL, Redis, Git, asyncio/httpx
  - **Cloud**: Microsoft Azure (Container Apps, ML Workspace, RBAC)
  - **Additional**: C++, C, ROS (1&2), Javascript/Next.js, MATLAB, Bash
- **Technical Competencies**
  - **MLOps & Production AI**: Cloud-native system architecture, containerization (Docker), experiment tracking (MLflow), and performance optimization for production AI systems.
  - **Statistical Model Evaluation**: Bayesian inference for quantitative analysis, corpus construction, and validation protocols to ensure empirical assessment.
  - **Core AI/ML**: Deep Learning (PyTorch), Bayesian Modelling, Natural Language Processing, Computer Vision (OpenCV), and Autonomous Systems (ROS).
- **Human Languages**: English (Fluent), French (Intermediate), Estonian (Improving), Danish (Basic)

Interdisciplinary Interests and Activities

Experimental Video Art, Sculptural Mechatronics *2015 - Present*
Exhibits: Esther Art Fair - NYC; NSFW - Göteborg SE; Dom Galerija - Riga LV; EKA Galerii - Tallinn EE