Phuong Nam Nguyen

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Profile

AI/ML Engineer with experience building, deploying, and optimizing machine learning systems in production across healthcare, sustainability, and industrial domains. **No visa sponsorship required.**

Education

MSc in Data Science & Artificial Intelligence 2023 - 2025
Eindhoven University of Technology *Eindhoven, Netherlands*
- Focus on Deep Learning, Computer Vision, and Generative AI
- **Thesis:** Distributed machine learning for medical image analysis under real-world compute and deployment constraints.

BSc in Artificial Intelligence (Cum Laude) 2020 - 2023
University of Groningen *Groningen, Netherlands*
- **Activities:** Teaching assistant
- **Thesis:** End-to-end medical image classification using Deep Learning.

Experience

AI Engineer Intern May 2025 – Dec 2025
Delft Imaging *'s-Hertogenbosch, Netherlands*
- Designed and implemented a distributed machine learning pipeline for medical image analysis, reducing communication and computation requirements by up to 40%.
- Applied model optimization to achieve 3x faster inference on CPU-based edge devices.
- **Tools & Technologies:** PyTorch, W&B, ONNX, Prometheus, Docker, Linux, Python

Junior Data Engineer (Part-time) Dec 2023 – Dec 2025
Greencaravan *Remote*
- Automated cloud infrastructure deployment using Infrastructure as Code, reducing manual setup effort.
- Built serverless APIs to integrate EV charging data, enabling downstream analytics and charging optimization.
- Developed a KPI analytics pipeline to assess user base health by extracting behavioral metrics and enabling real-time monitoring.
- **Tools & Technologies:** AWS (CDK, Lambda, API Gateway, EventBridge), GitHub Actions, MySQL, InfluxDB, Grafana

Software Engineering Intern Feb 2023 – Jun 2023
ASML *Eindhoven, Netherlands*
- Built a full-stack monitoring application to ingest, store and visualize KPIs in real-time, reducing manual monitoring time by up to 70%.
- **Tools & Technologies:** FastAPI, InfluxDB, Grafana, Docker, Linux, Python

Projects

Multilevel Audio Reconstruction with Implicit Neural Representations | Github
- Developed a multiscale encoder-decoder architecture using Implicit Neural Representations (INRs) for high-fidelity audio signal reconstruction.
- Conducted systematic benchmarking on public datasets, achieving competitive objective metrics (MSE: 0.012, MAE: 0.068).
- **Tools & Technologies:** PyTorch, slurm, Signal Processing

QuickSilver Graph Database Optimization | Github
- Designed and implemented performance-critical algorithms for large-scale data processing, reducing query execution latency.
- Improved query efficiency through optimized estimation, caching, and algorithmic design, lowering compute and memory overhead by up to 50%.
- **Tools & Technologies:** C++, Optimization, Algorithms, Graph Processing

RAG Travel Recommendation Map (Hackathon)
- Built an LLM-powered recommendation backend using Retrieval-Augmented Generation (RAG) for city-based travel suggestions.
- Implemented semantic search with FAISS and LLM-based ranking over Google Maps place metadata.
- **Tools & Technologies:** Python, FastAPI, LangChain, FAISS, LLMs

Skills

GenAI & LLMs: LLMs, Hugging Face, LangChain, Transformers, Retrieval-Augmented Generation (RAG)
Machine Learning: PyTorch, TensorFlow, scikit-learn, NumPy, pandas, Computer Vision
Programming Languages: Python, R, SQL, C/C++
MLOps & Deployment: AWS, Docker, FastAPI, CI/CD, Monitoring, Linux, Git, W&B
Data & Observability: InfluxDB, Prometheus, Grafana
Concepts: Distributed Systems, Optimization, Data-Intensive Systems
Soft Skills: Communication, Problem-solving, Teamwork, Scientific Research
Languages: English (C2), German (C2), Czech (Native), Vietnamese (Native)