Ali Vahedifar

AI Engineering • MLOps • Machine Learning • Data Engineering

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Data and ML engineer who builds pipelines from raw data to production and keeps them running. As a former **CEO** of a logistics-optimization company, built data pipelines over 3.2 PB of street-view imagery across 20,000+ km of roads and turned the needs of 100+ B2B clients into working technical solutions. At **Apple**, automated training-to-deployment workflows, ran production releases, and monitored live systems for drift. Strong in Python and SQL, with cloud experience on AWS and GCP. 5+ years building and operating data and ML systems, backed by a PhD in deep learning (Aarhus University). Based in Aarhus.

Experience

MLOps Engineer Feb 2025–Feb 2026
Apple — London, UK / Remote
- Automated training-to-deployment workflows and model validation; ran production releases and monitored live model performance, flagging drift before it reached users.

Chief Executive Officer Oct 2020–Oct 2022
LoOp — Logistics optimization company
- Owned commercial and operational decisions for 100+ mid-sized B2B clients; grew share value beyond EUR 15M while retaining 16% equity.
- Built deep-learning pipelines processing 3.2 PB of street-view imagery across 20,000+ km of roads.

Machine Learning Engineer Oct 2023–Dec 2023
Google — Sydney, Australia
- Implemented and benchmarked ML models; turned research prototypes into reproducible, production-ready pipelines.

Artificial Intelligence Researcher May 2024–Present
Aarhus University — Aarhus, Denmark
- Develop forecasting methods for noisy, non-stationary signals: mode decomposition combined with Shapley-value attribution to identify which components drive a prediction and how far to trust it (**IEEE INFOCOM, ICASSP 2026**).
- 10+ papers across **ICML, NeurIPS, CVPR, INFOCOM** and **ACM Computing Surveys**.

Education

PhD in Deep Learning May 2024–Apr 2027 (expected)
Aarhus University
- Marie Skłodowska-Curie Actions Doctoral Network Fellow (out of 440 applicants); Department of Electrical and Computer Engineering.

MSc in Information Theory Dec 2020–Dec 2023
University of Sydney — GPA: 4.0/4.0
- Ranked **1st** in cohort. Thesis: *Information Theory for Demystifying Representation Learning.*

Technical Skills

Languages	Python, C++, C, C#, SQL, Bash
Deployment	Docker, Kubernetes, CI/CD, Git; AWS, GCP
Backend & data	FastAPI, Kafka, PostgreSQL, Redis, Airflow
ML & MLOps	PyTorch, JAX, NumPy, pandas; MLflow, Ray; Prometheus, Grafana monitoring
AI tools & agents	Claude Code, Claude API, Claude Skills, MCP; prompt engineering; agentic workflows (tool use, subagents) to scope, build, and ship new features with AI
Quantitative	Time-series forecasting, statistics, stochastic processes, optimization, signal processing

Selected Publications

PAPER / CODE Shapley Neuron Values for Continual Learning: Which Neurons Matter Most? **ICML 2026, South Korea**
PAPER / CODE No Forgetting Learning: Memory-Free Continual Learning **NeurIPS 2026, Australia**
WILL BE PUBLISHED SOON When Is a Representation Sufficient? Probe-Based $\mathcal{V}$-Information for Neural Architecture Search **NeurIPS 2026, Australia**
WILL BE PUBLISHED SOON Learning with Unlearning: Synaptic Role Partitioning for Continual Learning and Machine Unlearning **NeurIPS 2026, Australia**
PAPER MFCT: A Multi-Feature Concurrent Transformer Model for Image Super-Resolution **CVPR 2026, USA**
PAPER / CODE Discrete Mode Decomposition Meets Shapley Value: Robust Signal Prediction in Tactile Internet **IEEE INFOCOM 2026, Japan**
PAPER / CODE Shapley Features for Robust Signal Prediction in Tactile Internet **IEEE ICASSP 2026, Spain**

Research Experience

Visiting Researcher Jun 2025–Sep 2025
Technical University of Munich — Munich, Germany
Research Assistant Oct 2023–May 2024
King's College London — London, UK
Research Assistant Aug 2022–Oct 2022
University of New South Wales (UNSW) — Sydney, Australia

Academic Service and Teaching

Reviewer / Program Committee: IEEE MLSP 2025; ICCV 2025; AAAI 2026; ICLR 2026; ICASSP 2026; ICML 2026; NeurIPS 2026; IEEE GLOBECOM 2026; ICASSP 2027, ICLR 2027.

Teaching Assistant: University of Tehran – Stochastic Processes, Statistics and Engineering Probability, Machine Learning, Information Theory, Signals and Systems (2021–2022). Aarhus University – Computer Vision (2025, 2026). Ferdowsi University of Mashhad – Statistics and Engineering Probability, Digital Signal Processing, Signals and Systems, Electronics I and III, Calculus II (2018–2020).

Languages: English (fluent; TOEFL 112/120) •, Danish (A2 / Module 3), Turkish (native), Persian (native)