ARASH DARAKHSH

Machine Learning Engineer / Data Scientist / Software Developer
Chalmers Graduate - M.Sc. Complex Adaptive Systems

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Gothenburg, Sweden

About me

Physicist and programmer with a big interest in machine learning and automotive engineering. My biggest strengths are computer vision (CV) and natural language processing (NLP). Problem solver, technology nerd, chess enthusiast and avid Formula-1 fan.

Work Experience

Associate Research Engineer & M. Thesis

GKN Aerospace Sweden AB

January 2023 - October 2024 | Trollhättan, Sweden

- Python, PyTorch, openCV, Scikit-learn
- Deep Learning & Computer Vision
- Full pipeline in developing deep learning models (CNN & Transformers) for industrial applications

Summer Job - Software Developer

GKN Aerospace Sweden AB

Summer 2023 | Trollhättan, Sweden

- Continuous integration of ML models

Summer Job - Assistant Plumber (VVS)

Kungälvs rörläggeri AB

5 summer breaks during 2014-2021 | Gothenburg, Sweden

- Construction from schematic drawings
- Installation of radiators, drainage systems, bathrooms, heat pumps, water pipes etc.

Education (4.4/5.0 GPA)

M.Sc. Complex Adaptive Systems - MPCAS

Chalmers tekniska högskola

2021-2023 | Gothenburg, Sweden

- Topics: Deep learning, computer vision, neural networks, statistics, optimization, data structures & algorithms. **Master's Thesis**

B.Sc. Engineering Physics - TKTFY

Chalmers tekniska högskola

2018-2021 | Gothenburg, Sweden

- Topics: Mathematical analysis, theoretical physics, experimental physics, programming and statistics. **Bachelor's Thesis**

Portfolio / Hobby projects

- OpenAI Generative Pretrained Transformer (GPT2) from scratch
- RST - Road Segmentation Tool
- ADAS U-Net road segmentation
- ACL - Autonomous Active Learning
- C-GEMM - C++ General Matrix Multiplication

Programming

Language	Experience
Python	Deep/Machine learning, data science, data visualization, statistics, applications, APIs and personal projects.
C/C++	Algorithms, memory management, GPU (openCL), vector intrinsics, optimization and high performance computing (HPC).
Matlab	Computational physics, Simulink, numerical simulations and statistics.
MySQL/SQLite3	Data tabulation, vector DB, online bot user logging and querying.
LabVIEW	Experimental physics and sensor acquisition.

Skills & Merits

Mathematics | Physics | Statistics & Big data | AI | Machine & Deep learning | Computer vision | Python | C++ | Data structures & Algorithms | PyTorch | Tensorflow Keras | Scikit-learn | OpenCV | Windows | Linux | CI/CD | Git | AWS | Docker | MLFlow | MLOps | TensorRT | FastAPI | REST API | NLP | Generative AI | LLM | RAG | AI Agents | Hugging Face | LlamaIndex | LangChain | OpenAI API

Swedish Citizen | B-license

Languages

Swedish Fluent, Native (citizen)

English Fluent, B2

French A2

Relevant courses

Complete Course List | Algorithms For Machine Learning and Inference | Machine Learning for Natural Language Processing | Statistical Learning for Big Data | Data Structures and Algorithms | Artificial Neural Networks | High Performance Computing | Image Processing