ARASH DARAKHSH

ML Engineer / Data Scientist / Full Stack 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 - December 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 projects </>

- ⭘ | 🐍 OpenAI GPT2 from scratch
- ⭘ | 🐍 Road Segmentation Tool
- ⭘ | 🐍 ADAS U-Net road segmentation
- ⭘ | 🐍 Autonomous Active Learning
- ⭘ | 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).
MySQL/SQLite3	Data tabulation, vector DB, online bot user logging and querying.
HTML/CSS/JavaScript	Frontend apps, websites, landing pages, npm, NodeJS, React.
Matlab	Computational physics, Simulink, numerical simulations and statistics.

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` `MCP` `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`
`Artificial Neural Networks`
`High Performance Computing`
`Image Processing`