ARASH DARAKHSH

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

@ darakrash@protonmail.com   in Arash-Darakhsh   ⌂ Darakhsh1999   🌐 Personal Website   📍 Gothenburg, Sweden

ABOUT ME

Physicist and programmer with a big interest in machine learning and automotive engineering. Problem solver, technology nerd, chess enthusiast and avid Formula-1 fan.

WORK EXPERIENCE

Associate Research Engineer

GKN Aerospace Sweden AB

📅 2024, March-October   📍 Trollhättan, Sweden

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

Summer Job - Software Developer

GKN Aerospace Sweden AB

📅 2023, June-July   📍 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, statistics
- **Bachelor's Thesis**

⌂ PORTFOLIO / HOBBY PROJECTS

- ⌂ RST - Road Segmentation Tool
- ⌂ ACL - Autonomous Active Learning
- ⌂ Stochtimizer - Stochastic Optimization Library
- ⌂ C-GEMM - C++ General Matrix Multiplication

PROGRAMMING

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

SKILLS & MERITS

Mathematics   Physics   Statistics & Big data
AI   Machine learning   Deep learning
PyTorch   Tensorflow Keras   Scikit-learn   OpenCV
Computer vision   Data structures & Algorithms
Optics   Camera physics   Linear algebra & Geometry
NLP   LLM   RAG
Windows   Linux
CI/CD   Git   Docker   MLFlow   MLOps
Electronics & EM   Experimental physics

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

Advanced Machine Learning with Neural Networks

Machine Learning for Natural Language Processing

Mathematical statistics

Statistical Learning for Big Data

Data Structures and Algorithms

Artificial Neural Networks

High Performance Computing

Image Processing

Stochastic Optimization Algorithms