

# ARASH DARAKHSH

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

@ darakrash@protonmail.com    in Arash-Darakhsh    Darakhsh1999    k arashdarakhsh    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 & 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 & Transformer) 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)

Kungälv's 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 & Deep learning

Computer vision

Python

C++

Data structures & Algorithms

PyTorch

Tensorflow Keras

Scikit-learn

OpenCV

AWS

Docker

MLFlow

MLOps

Windows

Linux

CI/CD

Git

NLP

LLM

RAG

Optics

Camera physics

Linear algebra & Geometry

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