

Mohammed Sedeg

AI ENGINEER & RESEARCHER

Turkey (open to relocate) | [Github protfolio](#) | [Email](#) | [Linkedin](#) | [Courses & Certifications](#)

AI Engineer & Researcher skilled in end-to-end machine learning, robotics, and automation — from research to real-time deployment across LLMs, vision, and edge AI.

Experience

VisionCore | AI Engineer, Computer Vision Specialist 2024 – Current

- Built low-latency models with TFLite/ONNX; achieved 60–80ms edge inference on Jetson & Pi.
- Optimized models (~40–60% size, 2× speed) via quantization, pruning, clustering.
- Automated 20–30% data labeling using Roboflow + generative augmentation solutions with VLMs.
- Deployed YOLOv8 PPE detector (85–90% mAP); reduced overfitting via anomaly detection (RF).

Freelancer | Generative AI & LLM Engineer 2024 – Current

- Fine-tuned GPT-2 & LLaMA via Hugging Face, LoRA, Unsloth (↑15% accuracy, ↓70% cost).
- Built scalable NLP stacks with LangChain, RAG, FAISS, MongoDB for context-rich generation.
- Applied quantization (gguf/llama.cpp), accelerated inference with ExLlamaV2.
- Enhanced output quality (+20%) via advanced prompting (CoT, ToT).
- Used PyTorch DDP, AMP, and optimized data loaders to cut training time by 20%.

Personal Projects

- [MyLLM](#)– Modular LLM framework (PyTorch) for training, fine-tuning, RLHF, and quantization.
- [SilvaXNet](#)– Lightweight DL framework (NumPy/CuPy) for GPU-based educational use.
- [PAPER2CODE](#)– Cross-framework (PyTorch/TF) reimplementations of ML research papers.

Education

Karabük University – M.Sc. in Mechatronics 2023

Major: Mechatronics | Specialization: Deep Learning

Sudan University of Science & Technology – B.Sc. in Electrical Engineering 2016

Major: Electrical Engineering | Specialization: Control System

Skills & abilities

- **Languages:** Python, C++, MATLAB.
- **Core ML & DL:** PyTorch, TensorFlow, JAX, Scikit-learn.
- **LLMs & NLP:** Hugging Face, LangChain, LoRA, PEFT, RAG, FAISS.
- **Computer Vision:** YOLOv8, OpenCV, Ultralytics, Roboflow, Detectron2, Albumentations.
- **Data & Workflow:** SQL, PySpark, Pandas, NumPy, MongoDB, MLflow.
- **Deployment & MLOps:** Docker, FastAPI, CI/CD, GitHub Actions, AWS (Amazon SageMaker).