

Mohammed Sedeg

AI ENGINEER & RESEARCHER

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

AI Engineer & Researcher delivering **production-grade AI systems** from research to deployment. Expertise in **LLMs, computer vision, robotics, and edge AI** with proven results in **model optimization, distributed training, and generative AI**.

Experience

VisionCore | AI Engineer, Computer Vision Specialist **2024 – Current**

- Built low-latency TFLite/ONNX models for Jetson & Pi (**60–80 ms inference**).
- Optimized models (**–40–60% size, 2× speed**) via quantization, pruning, clustering.
- Automated **25%** of labeling using Roboflow + VLM-based augmentation.
- Developed YOLOv8 PPE detector (**85–90% mAP**) + anomaly detection (RF), **–15%** over-fitting.

Freelancer | Generative AI & LLM Engineer **2023 – Current**

- Fine-tuned GPT-2 & LLaMA (**↑15% accuracy, ↓70% cost**) via Hugging Face, LoRA, Unsloth.
- Built scalable RAG stacks (Qdrant, FastAPI, MongoDB) for context-rich generation.
- Deployed quantized LLMs (gguf, ExLlamaV2) for **~3× faster edge inference**.
- Improved LLM outputs by **20%** using CoT & ToT prompting.
- Cut training time **20%** via PyTorch DDP, AMP, optimized loaders.

Key Projects

- [MyLLM](#)–Modular PyTorch LLM framework (training, fine-tuning, RLHF, quantization).
- [SilvaXNet](#)– Lightweight NumPy/CuPy deep learning framework for GPU/CPU educational demos.
- [PAPER2CODE](#)– Reimplementations of SOTA ML papers in PyTorch/TensorFlow.

Education

M.Sc. M.Sc. Mechatronics – Computer Vision | Karabük University – 2023

B.Sc. B.Sc. Electrical Engineering – Control Systems | Sudan University – 2016

Skills & abilities

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