

Moaz Mohammed El- Sayed Machine Learning Engineer | Backend & DevOps

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Professional Summary

Computer Engineering student with hands-on experience in computer vision and deep learning through research paper reproduction, internships, and competitions. Implemented a hierarchical temporal model for group activity recognition in video, surpassing published CVPR 2016 benchmarks using PyTorch and ResNet-50. Comfortable working independently and in teams, with a track record of delivering results under real-world constraints.

Experience

Startup Competition Participant (3rd Place Winner), *Creativa* 08/2025 – 05/2026

- Secured 3rd place for the startup Modaresy, winning 15,000 EGP.
- Developed innovative solutions, enhancing teamwork, communication, and problem-solving skills.
- Gained practical experience in project management and delivering results under deadlines

Education

B.Sc. in Computer Engineering, *Suez Canal University (SCU)* 09/2023 – 06/2028 | Ismailia, Egypt
GPA: 3.2

Technical Skills

Languages

Python, Go, C++

ML & Deep Learning

PyTorch, TensorFlow, Scikit-learn, Keras, OpenCV, Pandas, NumPy, Matplotlib

LLM & Retrieval

Hugging Face, LangChain, LangGraph, RAG, sentence-transformers, CLIP

Backend & DevOps

Go (REST APIs, JWT auth, sqlc), Docker, GitHub Actions, AWS (S3/CloudFront), Prometheus, Grafana, PostgreSQL, Linux

Tools

Git, GitHub, Neovim

Training & Courses

Machine Learning Specialization 📄, Coursera/Andrew Ng

Deep Learning Specialization 📄, Coursera/Andrew NG

Pytorch for Deep Learning 📄, Coursera/deeplearning.ai

Machine Learning Diploma 📄, CSkilled
Comprehensive coverage of ML techniques

HTTP servers in GO 📄, boot.dev

CI/CD with GitHub Actions, Docker and Go 📄, boot.dev

Projects

Deep Activity Recognition 📄, GitHub: Eng-Moaz | Python, PyTorch, ResNet-50, LSTM

- Reproduced and improved a CVPR 2016 hierarchical deep temporal model for multi-person group activity recognition on the Volleyball Dataset
- Replaced AlexNet backbone with ResNet-50, achieving 88.86% accuracy vs. 81.9% reported in the paper (+7%)
- Implemented person-level action recognition, team-based spatial pooling, temporal LSTMs, and real-time inference with bounding box overlays

AerySites 📄, Go, PostgreSQL, JWT, goose, sqlc, Paymob API

- Built a full-stack SaaS web agency platform in Go with 30+ REST endpoints, role-based JWT auth (admin/customer), and a PostgreSQL schema managed via goose migrations and sqlc
- Implemented a complete e-commerce flow: multi-currency pricing with discount tiers, cart and coupon system, and Paymob online payment integration with HMAC-SHA512 webhook verification

RAG Search Engine 📄, Python, sentence-transformers, CLIP, Groq API

- Built a full-stack RAG search engine over a movie dataset from scratch, implementing keyword (TF-IDF, BM25), semantic (sentence-transformers), hybrid (RRF), and multimodal (CLIP) retrieval pipelines
- Integrated LLM-powered query enhancement and reranking via Groq API (Llama-3.3-70b), cross-encoder reranking (ms-marco-TinyBERT), and RAG generation with inline citations; evaluated retrieval quality using precision@k, recall@k, and F1

NYC Taxi Trip Duration Prediction 📄, GitHub: Eng-Moaz

- Built a machine learning pipeline for predicting taxi trip durations, including data cleaning, feature engineering, and model training.
- Utilized Linear Regression, Random Forest, XGBoost, and CatBoost.
- Performed EDA, optimized model performance, and documented reproducible workflows.