

Omer Hayat

Abu Dhabi, UAE | oh2122@nyu.edu | [linkedin.com/in/omer-hayat](https://www.linkedin.com/in/omer-hayat) | omerhayat-portfolio.vercel.app | github.com/OmerNYU

EDUCATION

New York University Abu Dhabi

B.S. in Computer Science

Minors: Applied Mathematics, Philosophy, Artificial Intelligence

Abu Dhabi, UAE

Expected May 2028

EXPERIENCE

Robotics and Machine Learning Research Assistant

Aug. 2025 – Present

iCAS Lab, New York University Abu Dhabi

Abu Dhabi, UAE

- Designed and implemented a modular semantic-navigation stack for the Unitree Go2, spanning semantic memory, natural-language target resolution, safety validation, and ROS 2/Nav2 goal publication.
- Built a multimodal VLA training pipeline supporting generative SFT, NF4 QLoRA, official external splits, checkpoint/resume, prediction export, and provenance-preserving handoff into the lab's evaluation stack.
- Integrated the navigation system into the lab's ROS 2 stack; independent physical-robot testing achieved over 90% success across ~25 spoken-command trials, including chair and bag targets.

AdoptAI Fellow

May 2026 – Jul. 2026

AdoptAI, The Lombard Hill Group

Remote

- Built a reusable 12-sheet AI-adoption model using formulas and scripts to standardize three-year ROI, NPV, payback, break-even, and benefit-cost analyses for client engagements.

Software Engineer Intern

Feb. 2025 – Jun. 2025

Enrichly, Techstars '23

Abu Dhabi, UAE

- Owned frontend engineering for an early production Next.js chatbot prototype in a three-intern team, building three core product flows and reusable UI foundations from scratch.
- Reworked the chatbot into a site-wide voice-enabled assistant; integrated a Hugging Face model and built a 15-scenario evaluation harness that surfaced DSM-5 grounding errors and hallucinations, informing safeguards and product revisions.

Data Analyst

Jul. 2023 – Aug. 2023

CardPay, NIC LUMS

Lahore, Pakistan

- Built a Python extraction, SQL-cleaning, and Tableau workflow to rank about 50 SMEs, replacing manual prospect research; 6 of the top 10 recommendations became clients during the internship.

PROJECTS

Internship Monitor | *Python, AsyncIO, SQLite, Qwen, Ollama, RAG*

- Built an async internship-intelligence pipeline processing 2,800+ live listings across 15 Greenhouse and Lever sources, with deterministic assessment of role fit, geography, season, graduation, language, and work authorization.
- Added a local Qwen/Ollama layer with RAG, embeddings, structured outputs, and tool calling while keeping hard eligibility blockers deterministic and recording model, retrieval, and fallback provenance.
- Built a 70-case human-reviewed shadow evaluation system with no missed hard blockers; added SQLite state, bounded retries, source-health checks, idempotent notifications, and 221+ automated tests.

FailSpec | *TypeScript, React, Express.js, Playwright, OpenAI Codex*

OpenAI Build Week 2026

- Led platform architecture and integration in a three-person team for a local-first developer tool that converts bug reports into evidence-backed Playwright regression tests using OpenAI Codex.
- Built the investigation API and async execution pipeline across Codex analysis, isolated Git worktrees, controlled Playwright runs, persistence, and verification; hardened cross-platform execution with typed failure states and 286 automated tests.

PitchMirror | *Next.js, Fastify, FFmpeg, AWS, Amazon Bedrock*

Amazon Nova AI Hackathon 2026

- Built and deployed a solo multimodal presentation coach that reduced thousands of video frames to five representative keyframes while generating structured feedback on voice, presence, and content.
- Engineered an async AWS workflow across S3, DynamoDB, Step Functions, ECS Fargate, Transcribe, and Bedrock, with idempotent execution, schema validation, JSON repair, and deterministic partial-report fallbacks.

TECHNICAL SKILLS & ACTIVITIES

Languages: Python, TypeScript/JavaScript, C++, SQL

Backend & Web: FastAPI, Node.js, Express.js, Fastify, React, Next.js, SQLAlchemy, PostgreSQL

ML & Data: PyTorch, scikit-learn, Hugging Face, PEFT/QLoRA, RAG, pandas, NumPy

Cloud & Systems: AWS (S3, DynamoDB, Step Functions, ECS Fargate, Bedrock), Docker, Linux, ROS 2, GitHub Actions, Playwright, Git

Programs & Activities: AWS AI & ML Scholar (Future AWS AI Programmer); DeepLearning.AI ML Specialization;

Founder, *The Epoch* - Newsletter with 500+ subscribers