

Nihat Garibli

AI Researcher & Applied Data Scientist

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PROFESSIONAL SUMMARY Mathematically-driven AI Researcher and Data Scientist focused on bridging theory and applied Machine Learning. Strong in Computer Vision and advanced algebraic modeling, experienced across the full research lifecycle — from algorithm development to technical publication. Dedicated to building scalable AI solutions through analytical rigor and engineering excellence.

TECHNICAL SKILLS **Mathematics & Theory:** Linear Algebra, Multivariate Calculus, Statistics, Optimization.
AI & Machine Learning: Deep Learning (CNNs), Computer Vision, Model Optimization, LLM Integration.
Programming & Tools: Python (NumPy, Pandas, PyTorch, Scikit-learn, OpenCV), SQL, Git, LaTeX.

PROFESSIONAL EXPERIENCE **AI Researcher** Jun 2026 – Present
Baku State University — Baku, Azerbaijan

- Researching applied machine learning and computer vision, from algorithm development to technical publication.
- Building scalable AI solutions grounded in analytical rigor and engineering excellence.

Technical Assistant (Data Focus) Jan 2025 – Oct 2025
Baku State University — Baku, Azerbaijan

- Conducted data analysis on operational and project-related datasets to extract actionable insights.
- Prepared clear reports and interactive dashboards to support data-driven decision-making.
- Automated reporting pipelines using Python and SQL.

EDUCATION **BSc Computer Science — Dual Degree Program** Oct 2025 – Nov 2026
Holon Institute of Technology — Holon, Israel

BSc Computer Science (SABAH Groups) Sep 2022 – Jun 2026
Baku State University — Baku, Azerbaijan

SELECTED PROJECTS **OriVision: AI-Powered Origami Recognition**

- Developing a Deep Learning system using CNNs (MobileNetV2) to classify intricate paper models.
- Integrated a Groq LLM to provide real-time, step-by-step folding instructions based on visual input.
- Technologies: Python, PyTorch, Computer Vision, LLM API. — github.com/nihatgaribli/origami-recognition-system

RESEARCH & PUBLICATIONS

Eigenanalysis: From Intuition to Practical Python (Medium / ResearchGate)
The role of eigenvalues and eigenvectors in optimizing AI algorithms and understanding data structure.

Principal Component Analysis: Theory and Python Realizations (Medium)
Mathematical derivation of PCA with a step-by-step NumPy implementation for dimensionality reduction.

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CERTIFICATIONS

OCI 2025 Certified AI Foundations Associate — Oracle University · GenAI, Machine Learning & Prompt Engineering

Advanced Computer Science Skills — Constructor University & IDDA · Algorithms & mathematical problem-solving

Advanced Python Programming — University of Michigan (Coursera) · Data structures & analysis libraries

Python Data Analytics — Meta (Coursera) · Pandas, Matplotlib & real-world case studies

LANGUAGES

English — Professional Working Proficiency

Russian — Limited Working Proficiency