

Aksel Aghajanyan

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[Aksel Aghajanyan](#), [Linkedin](#), [GitHub](#), [Medium](#)

Data Scientist & ML Systems Engineer specializing in high-performance data pipelines, low-level GPU acceleration, and open-source AI tooling. Driven by a strong mathematical foundation in linear algebra and calculus, with proven experience building custom compute frameworks, agentic workflows, and LLM-integrated backend architectures.

WORK EXPERIENCE

Sep 2024- Present

Lead Python Engineer | [Global IT Academy](#)

- Architected intelligent backend systems and automation workflows using Python, integrating large language models (LLMs) and custom AI APIs into production.
 - Taught practical programming paradigms, data structures, and modern AI-assisted development workflows to students
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PROJECTS & INITIATIVES

PyTekt & PyTekt Agent

Creator & Lead Developer

Architected an open-source scientific simulation library for AI researchers, along with an autonomous agent framework designed to connect custom APIs and automate backend execution pipelines

OpenKL

Systems Developer

Engineered a low-level GPU optimization library designed to accelerate high-performance computing and compute-heavy machine learning workload

Aqwel AI

Founder

Founded an early-stage initiative focused on open-source AI experimentation, intelligent automation, and developer-first tooling.

ADDITIONAL INFORMATION

- **Core AI, ML & Deep Learning:** End-to-end modeling using PyTorch, TensorFlow, and Scikit-learn, covering traditional ML algorithms (Regression, Classification, k-NN, SVM, Decision Trees, Gradient Boosting), CNNs, RNNs, LSTMs, GANs, NLP, Computer Vision, and GPU acceleration (CUDA, Triton, TensorRT).
 - **Data Science & Analytics:** Advanced EDA, feature engineering, pipeline design, hypothesis testing, model evaluation, and statistical computing utilizing Python (NumPy, Pandas, SciPy, Matplotlib, Seaborn, Scikit-learn, Jupyter) and R.
 - **Advanced Mathematics for AI:** Focus on Linear Algebra (SVD, Eigenvalues, Norms, Inner Products), Probability, Calculus (Gradients, Jacobians, Loss Surfaces), Optimization (Gradient Descent, Convexity), Information Theory, Discrete Math, and Random Matrix Theory (Spectra, Concentration, Double Descent).
 - **Automation & Bots:** Intelligent automation systems and Telegram bots developed with Python and pyTelegramBotAPI, featuring real-time message handling and contextual memory management.
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Education

Computer Science (CS) Yerevan State College of Informatics

Sep 2024 – Present