Esfandiar Kiani

AI & RAG Engineer • Cloud Systems Architect • Tech Strategy

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Tehran / Persia • Remote & Distributed

EXECUTIVE SUMMARY

AI Engineer, Systems Architect, and Head of Infrastructure & AI Services at **Netzo-Cloud** with deep specialization in production Retrieval-Augmented Generation (RAG), latent diffusion models, speech DSP (NISQA), high-reliability embedded control systems, and scalable cloud-native backends. Experienced in delivering enterprise-grade AI workflows with high privacy guarantees, high-throughput microservices, and multispectral/medical vision pipelines. Proven track record bridging technical engineering squads with executive stakeholder directives.

PROFESSIONAL EXPERIENCE

Head of Infrastructure, Networks & AI Services (IaaS / SaaS / AIaaS) — Netzo-Cloud **2025 & 2026**

- Architected and deployed full-stack cloud and datacenter infrastructure: server hardware provisioning, hypervisor virtualization clusters, and software-defined networking.
- Engineered automated IaaS, SaaS, and AIaaS platform services, container orchestration engines, and hardened Linux environments (netzo-cloud.com / netzo.ir).
- Serving as lead infrastructure architect and technical advisor, maintaining core platform reliability, security standards, and scalable microservices.

AI & RAG Engineer — LLM Architecture Team — **Toosai Platform** **Oct 2025 – Oct 2026**

- Co-architected enterprise-level Retrieval-Augmented Generation (RAG) and LLM orchestration workflows for large-scale multi-tenant energy and tourism domain knowledge repositories.
- Engineered high-precision hybrid retrieval systems (dense semantic vector search + BM25/lexical reranking) and automated multimodal document parsing pipelines.
- Built robust MLOps streaming state coordinators and evaluation benchmarks adhering to strict enterprise confidentiality standards.

Project Manager (Internal Operations) — **Civil & Technology Enterprise** **2023 – 2025**

- Directed internal engineering operations, project milestones, and cross-functional delivery between applied AI research and production software systems.
- Established agile development sprints, QA standards, and technical documentation across multi-disciplinary engineering branches.

EDUCATION

M.Sc. in Artificial Intelligence — K. N. Toosi University of Technology (KNTU) **2024 – 2026 | Tehran, Iran**

- **Thesis:** On-the-Fly Aviation Risk Mitigation using AI (Supervisor: Dr. Seyed Hossein Khasteh)
- GPA: ~17/20 • Ranked **80th Nationwide** in the Iranian M.Sc. Entrance Examination (No quota).

B.Sc. in Computer Engineering — **University of Isfahan** **2020 – 2024 | Isfahan, Iran**

- Ranked **1st in Graduating Class** • Accelerated graduation in 7 semesters with GPA ~19/20.
- Curriculum focus: Operating Systems, Computer Architecture, Algorithms, Distributed Computing, Discrete Mathematics.

CORE TECHNICAL PROFICIENCIES

AI & Data Science	Large Language Models (LLMs), Enterprise RAG, Latent Diffusion (ViTON), Computer Vision (OpenCV), Speech/Audio DSP (NISQA), Time-Series Transformers, Vector DBs, PyTorch
Systems & Hardware	Linux Kernel/Admin, Docker, Microservices, Embedded/MCU (STM32, ARM Cortex, C/C++, SPI/I2C/UART/CAN), Real-Time Control & Telemetry, MATLAB/Simulink, High-Availability Virtualization
Languages & Core	Python (Expert / Clean Code), C / C++, Modern PHP, SQL (PostgreSQL, MySQL), JavaScript, VHDL, Git/GitHub, REST/RPC APIs
Leadership & Strategy	Product Management, Technical Roadmapping, Multi-Disciplinary Engineering Leadership, Research-to-Production Translation, Enterprise Standards & ATS Compliance

Esfandiar Kiani — Technical Portfolio & Credentials

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SELECTED ENGINEERING PROJECTS

Speech Quality Assessment & Enhancement (NISQA) — **Audio DSP & Deep Learning** 2025

Architected non-intrusive speech quality evaluation pipelines using the NISQA framework and psychoacoustic feature engineering, predicting multidimensional MOS metrics across degraded telecommunication channels.

Generative Virtual Try-On Pipeline (ViTON) — **Diffusion & Computer Vision** 2025

Engineered high-fidelity virtual try-on pipelines orchestrating latent diffusion models, pose estimation, and dense human parsing for geometric garment alignment and texture preservation under unconstrained human poses.

Embedded Systems, Real-Time Controller & Telemetry — **Microcontroller Firmware & Hardware** 2023 – 2024

Engineered real-time MCU firmware (STM32, C/C++) for fault-tolerant controller units, multi-channel sensor telemetry, and hardware serial protocols (SPI, I2C, UART, CAN). Modeled dynamical state estimation and closed-loop control in MATLAB/Simulink.

Interactive Document Difference Tool — GitHub: Diff-Viewer 2024

Engineered visual document comparison software parsing PDF, DOCX, code, and Jupyter Notebooks with syntax-highlighted side-by-side inspection and high-performance difference rendering.

PUBLICATIONS & TECHNICAL REPORTS (RESEARCHGATE VERIFIED)

Comprehensive Drug Information System Project 2024 | Bachelor Thesis

Unified pharmaceutical relational data architecture and retrieval engine. DOI: 10.13140/RG.2.2.28140.37768

Behavioral & Structural VHDL Implementation of ROM 2023 | Technical Report

Design and hardware validation of ROM architectures using VHSIC methodology. DOI: 10.13140/RG.2.2.26447.46247

Applied Differential Equations in Computational Engineering 2022 | Research Paper

Mathematical modeling analysis with over 20,000 reads and recommendations on ResearchGate. DOI: 10.13140/RG.2.2.10507.82724/1

Descriptive Statistics Report of Bird Strikes in Aviation 2021 | Statistical Report

Empirical wildlife collision risk analysis on FAA and civil aviation incident databases. DOI: 10.13140/RG.2.2.17061.42726/1

CERTIFICATIONS

AI & Machine Learning (CS50) 2024
Harvard University • Verified Credential ↗
Search algorithms, probability, neural networks, reinforcement learning.

Python Programming Certification 2022
Technical & Vocational Org (Score: 90%)
Core OOP, data structures, algorithms, and practical software design.

Clean Code & Algorithm Design 2021
Top Learn Academy • Verified Course ↗
SOLID design principles, defensive refactoring, and code scalability.

Linux LPIC-1/102 & IoT 2021
Sharif University of Technology
System administration, process management, and microcontroller IoT.

HONORS & DISTINCTIONS

Finalist Team — Rahisho Innovation 2024
Score 91/100 • 16k+ Entrants • Commercialization
Selected finalist with AI multispectral & IoT orchard monitoring.

Ranked 80th Nationwide 2023
National M.Sc. Entrance Examination
Secured top 80 nationwide across all CE/CS graduates (no quota).

Finalist — Tech Olympics 2025
International Technology Olympics
National finalist for algorithmic problem solving and architecture.

Founding Member — AI Association 2025
K. N. Toosi University of Technology
Co-founded and structured official university AI initiatives.