MEHRDAD JANNESAR

AI Engineer & Software Architect | LLM Systems, Agentic AI & .NET/Python Backend Engineering

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PROFESSIONAL SUMMARY

AI Engineer & Software Architect with 10+ years building backend systems and 2+ years applying that foundation to LLM applications, agentic AI, and retrieval-augmented generation. Combines a C#/.NET and Python/Django background with hands-on work across the modern LLM ecosystem (LangChain, LangGraph, RAG, vector databases). M.Sc. in Artificial Intelligence and Robotics with two peer-reviewed publications. Delivered interbank payment systems, POS software, and computer-vision platforms for banks, telecoms, and retail chains, and now designs AI-native architectures on that domain foundation.

CORE SKILLS

AI Engineering: LLM Application Development, Agentic AI, AI Agent Engineering, Prompt Engineering, Forward Deployment Engineering (FDE)

LLM Ecosystem: LangChain, LangGraph, OpenAI API, DSPy, Model Context Protocol (MCP), Ollama, OpenHands

AI Infrastructure: Retrieval-Augmented Generation (RAG), Vector Databases (Qdrant, ChromaDB), Embedding Models, Semantic Search, AI Evaluation

Backend & Architecture: C#, .NET, ASP.NET Core, Python, Django, FastAPI, Flask, Microservices, DDD, Clean Architecture, Event-Driven Architecture

DevOps & Data: Docker, Kubernetes, GitHub Actions, Azure DevOps, Linux, SQL Server, MongoDB, Oracle, Entity Framework Core

Testing: TDD, BDD/SpecFlow, xUnit, API Testing

PROFESSIONAL EXPERIENCE

Senior Developer — Mar 2024 – Present

Dotin / Riton — Tehran, Iran

- Architect and build AI-powered backend systems combining .NET/C# and Python, applying LLM application development and agentic AI patterns to production workflows.
- Design retrieval-augmented (RAG) pipelines using vector databases and embedding models for semantic search and knowledge-grounded applications.
- Apply Clean Architecture, DDD, and event-driven design across microservices; use Docker/Kubernetes and GitHub Actions for CI/CD.

Senior Developer — Sep 2023 – Mar 2024

NAVACO Information Technology Co. — Tehran, Iran

- Developed banking gateway and POS software used in production interbank payment flows.
- Built interbank PSP (Payment Service Provider) software integrating Maskan Bank and Pasargad Bank.
- Designed and implemented banking discrepancy-reporting software to reconcile transaction records.

Software Developer — Nov 2021 – Sep 2023

Freelance — Tehran, Iran

- Built a photography information-management system for independent studio clients and a visitor reporting/statistics application for Sarvestan Mobile Store.
- Delivered banking account-control software for Dr.Mobile Store to track customer transactions.

Senior Developer — Aug 2020 – Aug 2021

Paya Communication Industries — Tehran, Iran

- Led software development management across multiple concurrent client projects in Python/Django and C#/ASP.NET MVC.
- Built a license-plate recognition system and management panel for the Mobile Communication Company of Iran (MCI), plus a cloud-based online coding platform for MCI.
- Developed a refrigerator temperature-monitoring platform for Refah retail chains and a visitor traffic-control system for Ayandeh Bank's central branch.

Instructor (Part-time) — Jan 2018 – Jan 2020

Shamsipour Technical and Vocational College & Enghelab Technical and Vocational College — Tehran, Iran

- Taught specialized software engineering courses to undergraduate students at two institutions concurrently.
- Designed course materials and assessments; evaluated student performance.

Junior Developer — Apr 2015 – Aug 2016

Iranian Reinsurance Co. — Tehran, Iran

- Developed back-end services in C# and web applications with ASP.NET MVC.
- Built internal automation tools and a structured data-entry platform for organizing insurance documents and records, improving retrieval workflows.

EDUCATION

M.Sc. in Artificial Intelligence and Robotics **Sep 2016 – Jul 2022**

Islamic Azad University, South Tehran Branch — Tehran, Iran

GPA: 15.93/20 · Thesis: "Generating Text Using LSTM Based on an Incremental Framework" (Supervisor: Dr. V. Seydi)

B.Sc. in Software Engineering **Sep 2013 – Jun 2016**

Islamic Azad University, North Tehran Branch — Tehran, Iran

GPA: 14.79/20

PUBLICATIONS & CERTIFICATIONS

- Jannesar, M. (2022). Generating Text Using LSTM Based on Incremental Framework. NeuroQuantology, 6(12), 2207–2217.
- Jannesar, M. (2022). Scene Recognition Using Multi-Label Multi-Resolution CNN. J. Positive School Psychology, 20(15), 7099–7106.

Certifications: Django, Python & ASP.NET Core (Qalcert) — Barnamenevisan Co. (2023) | Data Analysis & Machine Learning — Tehran Technical College (2023) | Deep Learning — Sharif University / Laitec (2020) | IEEE-MAD AI Workshop Instructor, Tarbiat Modares University (2019) · Languages: Persian (Native), English (Fluent, TOEFL iBT 113)