Milad Mobaseri

Software Engineer · Applied AI

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01 PROFILE

Software engineer with five years of experience designing, building and operating production systems, and a B.Sc. in Computer Engineering (GPA 18.41/20, among the top three of the program every semester). I am moving into research in applied AI, with a focus on the security of LLM-based web agents, Persian natural language processing and computer vision that holds up on real-world input.

02 RESEARCH INTERESTS

Agent security — Web pages are untrusted input to the LLM agents that read and act on them; I am starting to study prompt injection against such agents and how to defend them.

Persian NLP — Adapting open language models to Persian conversation through parameter-efficient fine-tuning and long-term user memory.

Computer vision — Methods evaluated on public benchmarks and real photos, deployed to run entirely in the browser.

03 EDUCATION

B.Sc. Computer Engineering — *2022 — 2026*

Islamic Azad University, Kazerun Branch

- GPA 18.41 / 20 · among the top three students of the program in every semester
- Final project: an online appointment-booking system for barbershops (Django), github.com/Milad1098/BarbershopOnline
- Secretary of the Computer Engineering Scientific Association (two years)

M.Sc. Artificial Intelligence — *2026*

Application submitted for the 2026 intake

04 RESEARCH & OPEN-SOURCE PROJECTS

Image processing projects — github.com/Milad1098/image-processing-projects — *Open source · 2026*

Three projects, each with a written case study of what failed on real photos · Python · PyTorch · OpenCV · NumPy · ONNX Runtime Web · Pyodide

- Background removal: benchmarked five neural networks and a classical GrabCut baseline on the DUTS and P3M datasets, and showed that the most accurate model was the wrong choice for the browser; the selected model (MODNet) is roughly eight times smaller and runs in under a second, at a cost of 0.02 IoU.
- Document scanner: page detection, perspective correction and shadow removal with OpenCV, running client-side through WebAssembly; both tools are live at miladmobaseri.ir/en/tools.
- Pixel-art conversion: palette quantisation in the LAB colour space and error-diffusion dithering, compared against RGB.

Fesghel — Persian conversational agent — *2024 — paused*

Telegram-based assistant with a consistent Persian persona · Python · QLoRA · Hugging Face TRL · PostgreSQL · aiogram

- Provider-agnostic LLM layer, with short- and long-term memory and an evolving per-user profile stored in PostgreSQL.
- Data pipeline that exports, cleans and anonymises chat logs and generates synthetic dialogues for training; no real user data is published.
- Parameter-efficient fine-tuning (QLoRA with Unsloth and TRL) of Qwen2.5-3B and of a Persian Llama-3.1-8B model. Paused for lack of GPU infrastructure.

05 ENGINEERING EXPERIENCE

AutoWin — autowin.ir *Founder & sole engineer · 2026 — present*

Platform that automates registration on systems whose capacity fills within seconds · C# / .NET (Avalonia) · Python · Django · Kotlin · Linux

- Designed and built every part, a Windows launcher, an Android companion app, a central server and the execution agents, and operate the system in production.
- Built the reliability layer: shared logging, recovery after failure and a single authenticated path between the desktop, mobile and server components.

AzadCenter *Sole engineer · 2023 — present*

Telegram platform for university students · Python · aiogram 3 · Flask · MySQL

- Study-material marketplace with online payments, a wallet that pays contributors their share of each sale, fuzzy Persian search and an admin panel.

Freelance Software Engineer — self-employed *2021 — present*

- Web platforms, Telegram bots, scraping and automation for clients, delivered end to end from requirements to deployment and maintenance.
- Selected client work: a Telegram sales bot for a social-media services provider (Nexorax) and a corporate website (Petro Tejarat Lavan).
- Open-source Android apps: Medicine Reminder and SmsForwarder (with CI).
- Personal website: a bilingual (Persian/English) Django + Next.js platform with its own analytics, technical SEO and structured data, deployed and operated on Linux.

Python Tutor — private teaching *2023 — present*

- Taught Python programming to eleven students in one-to-one courses.

06 SKILLS

AI & vision	PyTorch, OpenCV, NumPy, ONNX Runtime, Hugging Face (QLoRA, TRL), LLM APIs
Programming	Python, TypeScript/JavaScript, C#, Kotlin, SQL
Systems	Django, DRF, Next.js, React, PostgreSQL, Linux, nginx, Docker, Git, GitHub Actions
Languages	Persian (native) · English (upper-intermediate, B2, self-assessed)