

Ehsan Moradi

Senior AI & Full-Stack Engineer | RAG, LLM Agents, Computer Vision

ehsan.hightech@gmail.com | github.com/ehsanwwe | linkedin.com/in/ehsan-hightech

SUMMARY

Senior engineer focused on AI products, with more than a decade of building software that ships. Most of my recent work is in RAG systems and LLM agents: a recommendation engine that answers from a real product catalog, a multilingual diet-coaching agent, and an in-browser AR makeup SDK I published on npm. I am comfortable owning a system from its architecture down to the deployed code, moving between Python and FastAPI on the backend and Next.js, React, and TypeScript on the front end. Before AI became my main focus I spent years on real-time graphics and AR, which still feeds the computer-vision work I do today.

TECHNICAL SKILLS

AI & LLM: RAG systems, LLM applications, AI agents, conversational assistants, recommendation engines, prompt engineering, AI guardrails, multilingual AI

Frontend: Next.js, React, TypeScript, JavaScript, HTML, CSS, Tailwind, Vite, PWA, RTL interfaces

Backend: FastAPI, Laravel, Node.js, REST APIs, Redis, SQLite, authentication, admin panels, analytics

Computer Vision & Graphics: MediaPipe, OpenCV, FaceMesh, WebGL, Three.js, Unity, GLSL / HLSL shaders, real-time rendering

Languages: TypeScript, JavaScript, Python, PHP, C#, C++, Java

Tools: Git, Docker, Linux, npm

PROFESSIONAL EXPERIENCE

Awakening Dreams

Senior AI & Full-Stack Engineer / Hands-on CTO · 2019 - Present

- Built an AI consultation chat assistant that guides users through product discovery and clarifies what they need before recommending anything.
- Designed a RAG recommendation engine that pulls relevant products from the catalog using chat context and user intent, so answers stay grounded in real data.
- Developed a full cosmetics e-commerce platform in Laravel with inventory management, Redis caching, and an analytics layer.
- Built a raw-material discovery and product-matching platform, similar in concept to Covalo.
- Created a generative-AI system that produces standard hospital architecture plans from domain requirements.
- Built an AR virtual-makeup platform with real-time face tracking and a browser-based version.
- Ran engineering direction while staying hands-on across backend, frontend, AI, and graphics.

360KIA

Senior Software Engineer · 2013 - 2019

- Built one of the first spherical 360-degree video playback engines using C# and game-engine techniques.
- Developed an early markerless AR engine using sensor fusion from compass and accelerometer data.
- Implemented real-time 3D placement so virtual objects stayed grounded in physical space without markers.
- Focused on performance optimization, real-time rendering, and low-latency output.

Spiral Design

Software Engineer · 2012 - 2013

- Built an interactive book engine for Android and contributed to the award-winning interactive book "Jungle Pariya".
- Developed interactive media, animation, and user-interaction systems for mobile.

OPEN-SOURCE PROJECTS

OpenMakeupSDK — AR makeup & face-reshape SDK for the web (npm: open-makeup-sdk, MIT)

- Real-time, in-browser AR makeup mirror with no backend, built on MediaPipe FaceMesh (468-point tracking) and custom WebGL / GLSL shaders.
- Six makeup categories, 73 pattern textures, and matte / shimmer / glossy / glitter finishes, plus real-time 3D face reshaping (nose, lips, cheeks, jaw, brow) through blend shapes.
- Framework-agnostic ES modules with TypeScript types and config-driven assets.

Diet-Coach-Agent — Multilingual AI diet-coach agent

- AI nutrition assistant built with FastAPI, Next.js, and SQLite, packaged as an installable PWA with OTP auth, voice chat, and personalized meal planning with health guardrails.

BudgetMate — Persian-first, privacy-focused AI finance assistant

- Local-first finance app with full RTL support: budgeting, expense tracking, savings goals, an admin panel, and an AI finance chat, kept private by design.

WarpLess-Docs — Document de-warping (computer vision)

- Python tool that turns warped or skewed document photos into clean, scanner-like scans.

Unity Open-Source Packages

- Unity SoftBody Physics, a soft-body physics package (129 stars, 11 forks).
- Unity Helicopter Controller Kit, an aerodynamics-based flight-controller package (20 stars).

EDUCATION

M.Sc. in Artificial Intelligence · Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran · Graduated 2015