Hossein Hashemi

Senior Software & AI Engineer

hossein.hashemi.ir@icloud.com | +39 351 928 0194 | hosseinhashemi.info | linkedin.com/in/hoha

10+ years working with engineering teams and clients across software development, AI, computer vision and wireless systems.

Work Experience

Corestella — Barcelona, Spain
Founder & AI Engineer — *Oct 2026 - Present*

- Built a custom **LLM orchestration system** where AI agents turn a feature description into a spec, a work plan and then code.
- Designed it so a state machine, not the LLMs, decides each next step, with RAG and prompt engineering guiding each agent.
- Used it to build and launch **Trace5G.com**, a web app that runs a real, isolated 4G or 5G network per user and decodes its 3GPP messages live.
- Architected the full-stack **Python** and React platform, running in production on **AWS (S3, RDS)** with Docker, CI/CD and monitoring.

Apple Inc. — Milan, Italy
Field Design Engineer | On-site via Marquistech — *Oct 2022 - Sep 2026*

- Tested unreleased **iPhone, iPad and Apple Watch** hardware and software on live networks through field QA, **GCF testing** and Wave Automation.
- Diagnosed **LTE/5G modem and protocol-stack failures** from PHY, MAC, RLC, PDCP, RRC and NAS logs; worked with cross-functional teams to reproduce issues and support **root-cause analysis**.
- Executed **mobility and feature tests** covering cell reselection, handover, XCAP, supplementary services, **Emergency SOS**, GNSS and **NTN**.

OPPO — Milan, Italy
Device Validation Engineer | On-site via Marquistech — *2021 - 2022*

- Validated **OTA, IMS and network regression** against **Vodafone Italy** acceptance requirements; tracked and reported defects to OPPO R&D.

LG — Rome, Italy
Device Validation Engineer | On-site via Marquistech — *2020*

- Executed **lab and live-network tests** on mobility, **VoLTE** and **network KPIs**; captured logs and reported failures to LG R&D.

Marquistech
Test Engineer (Additional Client Projects)

Employer of record for client assignments above; promoted to Specialist in Engineering (2025).

- Tested release and pre-release **OnePlus, Realme, Vivo, Xiaomi and Huawei** devices, plus **Qualcomm/MediaTek** chipsets, across TIM, Vodafone, WindTre and Iliad; supported **MediaTek 5G NSA self-certification**.
- Automated device provisioning, log capture and OTA regression with **Python**; diagnosed failures using **QXDM, QCAT, SPRD and Wireshark**.

AI Retailer Systems — Zürich, Switzerland
Computer Vision Engineer | Part-time — *2019*

- Built **real-time multi-camera object tracking** and activity recognition pipelines in **PyTorch** (YOLO, DeepSORT).
- Optimized deep learning inference on embedded hardware using **CUDA, OpenCV and TensorRT**, achieving real-time throughput of **30+ FPS**.
- Developed **3D human pose estimation** and **action recognition** models leveraging skeletal time-series data.

Tehran Institute of Technology (MFT) · *MATLAB, Robotics & AVR Instructor* — Tehran · *2014 - 2015*

- Taught three courses over two semesters alongside full-time engineering work.

Tarh-O-Kavosh Engineering · *Software Engineer* — Tehran · *2011 - 2014*

Education

Sapienza Università di Roma — Rome, Italy · *2015 - 2020*
Coursework toward M.Sc. in Artificial Intelligence and Robotics

Research: 3D human pose estimation from images/video and activity recognition using skeletal time-series data.

Institute of Higher Education Salehan · *B.Sc. in Computer Engineering (Software)* — Sari, Iran · *2012 - 2015*

Islamic Azad University, Sari Branch · *A.Sc. in Computer Science* — Sari, Iran · *2010 - 2012*

Technical Skills

- **Languages**: Python, C/C++, TypeScript, JavaScript, Java, SQL, Bash
- **ML & Data**: PyTorch, Scikit-Learn, NumPy, Pandas, Spark
- **Cloud & DevOps**: AWS, Azure, Docker, Linux, Git
- **GenAI & LLMs**: AI Agents, RAG, Prompt Engineering, LLM Evaluation
- **Backend & Web**: FastAPI, REST APIs, Node.js, React, PostgreSQL
- **Testing**: Test Automation, 5G NR, Protocol & Log Analysis

Publications, Patent & Book

- **IEEE MeMeA, 2018**: *"Controlling the depth of anesthesia during operation by vital parameters of the patient's body using a fuzzy controller."* [DOI]
- **Jurnal Teknologi, 2014**: *"Evaluating feature extractors and dimension reduction methods for near infrared face recognition systems."* [DOI]
- **Patent**: *"Commute Controlling in Vehicle (Intelligent Traffic Lights)."* Publication No. 53864, 2008. Adaptive traffic signal control.
- **Book**: *24 Stories from Mazandarani Newcomers*. Hamnegar Sari workshop members. ISBN 9786001000829.

Honors & Professional Memberships

- **Awards**: EU Horizon research grant (€13,000) · 1st place, IranOpen national robotics competition · 1st place, Provincial Computer Olympiad Gold medal, Noshirvani robotics competition · Gold medal, Kharazmi Innovation Festival
- **Memberships**: IEEE member since 2014 (Communications & Signal Processing Societies); PMI member with 40+ training hours in project management, business analysis and requirements engineering.

Languages

- Persian (native) · English (fluent) · Italian (B1) · German (A1)