

Hossein Gholami

Embedded & IoT Engineer

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Profile

Embedded & IoT engineer with 4+ years of experience in warehouse automation and connected devices. Hands-on with ESP32/STM32, MQTT, and real-time systems; comfortable across backend (Django/FastAPI, RabbitMQ) and DevOps (Docker, Linux). Led cross-functional efforts to reduce costs and cycle times.

Skills

Embedded & IoT

- ESP32 (ESP-IDF, FreeRTOS),
- STM32 (CubeMX/CubeIDE, FreeRTOS)
- MediaTek MT2503 (Nucleus RTOS), Quectel OpenCPU, AiThinker A9
- Interfaces & Features: CAN, UART, I²C, SPI, ADC, OTA, MQTT

Backend

- Python (Django, FastAPI), Celery, RabbitMQ, Redis

- SQL/NoSQL, REST APIs, basic data pipelines

Frontend

- React, HTML5, CSS3, JavaScript

DevOps & Tools

- Docker, Git, Linux, Jira

Soft Skills

- Team leadership, cross-functional collaboration, Agile delivery

Languages (Human)

- English — C1 (EF SET); Persian — Native

Work Experience

Digikala — Automation & Robotics Team

Software Engineer, Tech Lead

2022–Present

–Led embedded and IoT system design for large-scale e-commerce warehouses, focusing on real-time MQTT communication, OTA updates, and cost-efficient hardware. Delivered end-to-end solutions from firmware to cloud services and collaborated closely with cross-functional teams.

- **Dimension Detection:** Developed a LiDAR + load cell + computer vision system on Raspberry Pi with <1 cm accuracy, improving carton selection and lowering shipping costs. - [more detail](#)
- **Wheel Sorter:** Developed a high-speed sorter with CAN-bus motor drivers, MQTT integration and barcode vision, boosting throughput and reducing manual handling. - [more detail](#)
- **Put-to-Light v2:** Re-architected system using ESP32 and RGB LED strips; cut sorting time per item from 6.0s to 5.1s and reduced build cost by 60%.. - [more detail](#)
- **Put-to-Light v1:** Implemented AVR-based CAN-bus nodes with buttons and lights (OTA-enabled), guiding operators visually and improving picking accuracy. - [more detail](#)
- **Smart Scale:** Designed a Wi-Fi scale (0.1–50 kg) with high-precision load cell (error <11.5 g at 50 kg), auto-sending weights via MQTT to WMS. - [more detail](#)
- **Noise Detector:** Developed a sound-level monitoring device for public spaces, enabling proactive environment management. - [more detail](#)

Basir Andishan Bina Tadbir (BABT)

Embedded Software Engineer

2021–2022

- Built a **MediaTek MT2503**-based GSM+GNSS vehicle tracker under limited vendor support; delivered OTA & telemetry features.- [more detail](#)

Andishe Fartak AmirKabir (Atrovan)

Embedded Developer

2018–2019

- STM32F1 firmware for IR learn/regenerate + ESP8266 connectivity; consolidated multiple remotes into a smart-home device. - [more detail](#)

Education

Amirkabir University of Technology — M.S., Electrical Engineering (Digital Electronics)

2018–2021

Analysis of Data Received from Vehicles for Driver Behavior Profiling on the Cloud (Dr.Motamedi) - [more detail](#)

K. N. Toosi University of Technology — B.S., Electrical Engineering (Electronics)

2014–2018

Implementation of Smart plug with sensors over MQTT (Dr.Mousavinia)- [more detail](#)