

Hue (MohammadHossein) Salari

Computer Vision Researcher

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Education

- Sep 2018** **Master of Science, Islamic Azad University, Shiraz Branch, Shiraz, Iran**
Sep 2021 **Artificial Intelligence and Robotics** **Rank:** 1st in the class, **GPA:** 19.79/20
Thesis: Automated detection of dams' location in satellite imagery and monitoring of the dam's lake reservoir changes using deep neural networks [\[Link\]](#).
Highlights: Creating all the necessary datasets for the experiment; using deep learning-based object detection techniques (such as **YOLOv5**, **Faster R-CNN**, and **RetinaNet**) and image classification models (such as **VGG** and **ResNet** and **DenseNet**) for dam detection, and utilizing classical image processing methods for change detection.
- Sep 2011** **Bachelor of Science, Shiraz University of Technology, Shiraz, Iran**
Jul 2016 **Electrical Engineering** **GPA:** 14.37/20
Final project: Recycle & Reward vending machine using ARM Cortex-M microcontroller and barcode reader.

Skills

- Programming** Python, C, Golang, MATLAB
AI & ML PyTorch, TensorFlow/Keras, OpenCV, Pandas, NumPy, scikit-learn
Web Scraping BeautifulSoup, Scrapy, Selenium
Visualizations Matplotlib, Plotly
Web CSS, HTML, Flask, Django
Electrical Engineering ARM Cortex-M3 family (STM32x), ESP8266, ESP32, Arduino, AVR (ATmega & ATtiny family), STM8, Raspberry Pi, EaglePCB, LoRaWAN
Other Linux, LaTeX, Git, MySQL, SQLite, Elasticsearch, APIs of Twitter and Telegram

Awards and Honors

- Oct 2022** **IEEE GRSS IADF School, IEEE Geoscience and Remote Sensing Society, Online**
I was fortunate to be chosen as one of the 85 candidates to participate in the IEEE GRSS First IADF School [\[Link\]](#) on Computer Vision for Earth Observation, among more than 700 applicants. During the IADF School, I had the privilege to learn from accomplished researchers and delve into a variety of subjects such as Image Fusion, Explainable AI for Earth Science, Big Geodata, Multi-source Image Analysis, Deep Learning for Spectral Unmixing, SAR Image Analysis, and Learning with Zero/Few Labels.
- Mar 2022** **AI Bootcamp, School of Artificial Intelligence, Pi School, Rome, Italy**
May 2022
I received a full scholarship to participate in the Pi School. I worked on two projects presented by real investors. The first project involved generating 3D facial animations from audio and text, while the second project concerned estimating the exact amount of fuel remaining in a car's fuel tank from OBD (On-Board Diagnostics) data.

Since 2020 Member of Young Researchers and Elite Club [\[Link\]](#).

Publications (Work-in-Progress)

Detecting Caravansaries in Satellite Images Using Deep Learning-Based Image Processing, **MH. Salari**, MA Shaygan, F. Faraji

Improving SMS Spam Detection in the Persian Language by Providing a Comprehensive Database of Persian SMS **MH. Salari**, MA Shaygan

Teaching Experience

2013 & 2014 Semesters Teaching assistant in undergraduate course "**Microprocessors**", *Shiraz University of Technology*, Shiraz, Iran

Summer of 2014 Teaching "**AVR Microcontrollers**", *Shiraz University of Technology Summer School*, Shiraz, Iran

2013 Semester Teaching assistant in undergraduate course "**Microcontrollers**", *Shiraz University of Technology*, Shiraz, Iran

Work Experience

Feb 2019
Feb 2021 **CTO and Co-Founder, Quarkomm Startup**, Tehran, Iran

I co-founded Quarkomm as the R&D branch of SEP Co., where I previously worked, with the primary focus of creating prototypes for SEP Co. and drafting proposals for contracts. We successfully developed several prototypes and devices, including an Optical Infrared Reading Cable for measuring electricity consumption, a LoRaWAN(low-power, wide area networking protocol built on top of the LoRa radio modulation technique)-based smart streetlight, and an Image Processing-based recycling and rewards vending machine.

Achievements: Quarkomm was among the elite ten teams chosen to be based at Pardis Technology Park in 2019. Pardis Technology Park is Iran's first and largest technology park and operates under the guidance of the Iran Vice-Presidency for Science and Technology.

Aug 2018
Oct 2019 **Head of R&D Department, SEP Co.**, Tehran, Iran

I led the team responsible for constructing all necessary infrastructure for making smart electricity and water meters and transmitting the data over a LoRaWAN network. Additionally, my team developed a prototype version of a general-purpose firmware platform utilizing C/C++ on AVR/ARM microcontrollers for remote low-power measurement through a LoRaWAN network.

Achievements: - My team's proposal was chosen as the top technical idea (scoring 87 out of 100) in the IoT contract competition of the Hamrah Aval mobile operator.

- Our company received the smart element grant of Mashhad Municipality, based on the designs and prototypes developed by my team.

Apr 2016
Jan 2017 **R&D Electrical Engineer, Abr Network Startup**, Tehran, Iran

I was responsible for creating a user-friendly, plug-and-play programmable system for teaching electronics to young children. While at Abr Network, I constructed two sets of prototypes, one utilizing STM32 microcontrollers with a CAN connection and the other utilizing ESP8266 with wireless connectivity.

Languages

Farsi: Native

English: EF SET English Certificate 82/100 (C2 Proficient) [\[Link\]](#)