Hue (MohammadHossein) **Salari**

Eye Tracking Researcher

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CV Updated on Feb 2024

Note: Everything in this color is a link

Summary

I'm a doctoral researcher at the University of Eastern Finland. I am actively involved in the practical implementation and performance assessment of eye-tracking technology in real-world scenarios, and I'm passionate about the development of cost-effective eye-trackers for everyday applications. Beyond my doctoral research, I am a self-motivated and seasoned engineer, passionate about solving real-world challenges using deep learning. I'm a quick learner and a great team worker with a strong work ethic. I'm seeking opportunities to bring my academic and engineering skills to innovative projects and make a meaningful impact in the field.

Skills

Programming	Python, C, C++, Golang, MATLAB
AI & ML	PyTorch, TensorFlow/Keras, OpenCV, Pandas, NumPy, scikit-learn
Web Scraping	Beautiful Soup, 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, SQLite, Elasticsearch

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.

Education

Jun 2023

Doctoral researcher, *University of Eastern Finland*, Joensuu, Finland

I am a member of the MSCA Doctoral Network, participating in the Eyes for Information, Communication, and Understanding (Eyes4ICU) project. My project is titled DC 3: Effective and Robust Predictive Gaze-Based Models in the Wild.

Sep 2018
Sep 2021

Master of Science, *Islamic Azad University, Shiraz Branch*, Shiraz, Iran
Artificial Intelligence and Robotics **Rank:** 1st in the class, **CPA:** 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
Jul 2016

Bachelor of Science, *Shiraz University of Technology*, Shiraz, Iran
Electrical Engineering **GPA:** 14.37/20

Final project: Reverse vending machine using ARM Cortex-M µC and barcode reader.

Highlights: The university selected my final project to display at "The 17th Exhibition of Research and Technological Achievements".

Languages

Farsi: Native
English: EF SET English Certificate 82/100 (C2 Proficient)