Heydar Soudani | Curriculum Vitae

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RESEARCH INTERESTS

- Data Stream Processing
- Open World Recognition
- Novelty Detection
- Anomaly Detection
- Lifelong And Incremental learning
- Deep Learning

EDUCATION

- **Master of Science** 2019–Present
  Sharif University of Technology *Tehran-Iran*
  - Major: Computer Engineering (Artificial Intelligence) GPA: 17.38/20 via 20 credits
- **Bachelor of Science** 2014–2019
  Amirkabir University of Technology *Tehran-Iran*
  - Major: Electrical Engineering (Electronics) GPA: 16.81/20 via 140 credits
  - Minor: Computer Engineering (Software) GPA: 15.33/20 via 18 credits

CERTIFICATIONS

- **ARM Cortex-M3 NXP1768**
  This course took 50 hours to accomplish and successfully passed by the score 100/100. This course has been hold in **Tehran Institute Of Technology** in **Winter 2016**.
  - Teacher: Eng. Najafi

HONORS

- **Ranked 234th/661th** in university entrance exam (Konkour), among more than 222,000 participant for B.Sc degree [Summer 2014].
- Permitted to study Software Engineering as a minor (This permission is only awarded to talented students, introduced by the Exceptional Talents Office).
- **Ranked 8th** in university entrance exam (Konkour), for M.Sc degree [Summer 2019].

B.Sc THESIS

- Providing new cloud services and **CaaS** (Container as a Service) on the Kubernetes platform. The ultimate goal is to get container from user and meet customer needs for various hardware resources (processing, network, storage, memory, etc.) at the lowest cost. This project is divided into the following sections:
  - **Docker** for dockerize applications
  - **Kubernetes** for providing services
  - Supervisor: Dr. Taheri

INTERNSHIP

- **Creating mobile application for learning English language**
- Studying **React Native** and **Redux** mobile application frameworks.
- Developing back-end server for mobile applications using **Laravel** framework.
  - Supervisor: Dr. Sharifian

EXPERIENCE

- **Web Application Developer** — Jan 2018–Present
  Andishe Fartak Amirkabir (Atrovan) — *Tehran-Iran*
  Developing Web applications for:
  - Home automation (Smart Home)
  - Fleet management system (Fleetak)
  - Building management system (BMS)

  Developing Compony's Website
- **Web Application Developer** — Jun 2018–Jun 2019
  Tosee Pardazan Andishe Gostar (Shams) — *Tehran-Iran*
  Developing Web applications for:
  - two-sided platform for iron-sellers & buyers.

  Developing Compony's Website
- **Programmer** — Jan 2016–Oct 2017
  Control of Multi Vehicle Systems Laboratory — *Tehran-Iran*
  - Programming AVR and Arduino micro-controllers.
  - Designing a controller.
  - Machine Vision.

LANGUAGE SKILLS

- Persian Native
- Arabic Native
- English Intermediate

SOME COURSES

Machine Learning Theory	19.7	Microprocessor Systems & Interfaces	18
Deep Learning	18.6	Digital Signal Processing	16.7
Digital Image Processing	18.5	Electric Circuit II	18
Convex Optimization	16.9	Electronic II	16.9
Advanced Programming	17.25	Design Automation Of Digital Systems	16.6
Computer Programming	17.5	Internet Engineering	16.5
Computer Architecture & Microprocessors	19.1	Embedded Systems	16.5

COMPUTER SKILLS

Programming Languages

- JavaScript
- TypeScript
- HTML5
- CSS3
- Python
- C++
- C
- LaTeX

Machine Learning Frameworks

- PyTorch
- MOA
- TensorFlow

Web Application Frameworks

- React Js
- Redux
- Node Js
- Wordpress
- Next Js
- JEST
- Express

Technical Softwares

- MS. Visual Studio
- Keil
- ARM mbed
- Matlab
- Arduino
- git

Software Tools

- Docker
- Kubernetes

ACADEMIC PROJECTS

- Implementing **Learning Semantic-Specific Graph Representation for Multi-Label Image Recognition** ICCV 2019 paper with VOC2007 dataset using **Pytorch** framework.
  - Supervisor: Prof. Kasaei [Summer 2020]

- Designing and implementing **Binary and Multi Classifier** with the help of **Logistic regression** on data from normal distribution and MNIST dataset. We use **Gradient Descent**, **Newton**, **Natural Gradient**, **Stochastic Gradient Descent** and **SVRG** methods for optimization.
  - Supervisor: Dr. Jafari Siavoshani [Summer 2020]

- **Image and Video processing** using **OpenCV** library with python language.
  - Supervisor: Dr. Nik Abadi [Winter 2018]

- **Graph Coloring** using **BColoring** Algorithm with python language.
  - Supervisor: Dr. Bagheri [Summer 2018]

- **Implementing IOT network using Co-Design FPGA**. Containing smart parking and watering system and security system parts and this parts are controlled by **Microblaze**.
  - Supervisor: Dr. Saheb Zamani [Winter 2017]

- **Speaker Recognition** is the process of automatically recognizing who is speaking on the basis of individual information included in speech waves.This project implemented by **Neural Network** and **multilayer perceptron** method.
  - Supervisor: Dr. Abdollahi [Winter 2017]

- **Flying Quadcopter**. Controlling and flying quadcopter using **erle-brain3** and **Apm planner** software.
  - Supervisor: Dr. Abdollahi [Summer 2017]

- **ECG plotter**. In this project we read heart beat and bpm and body temperature by sensors using **arduino**. After that send data to PC by Serial and plot graph for significant signs of the body in GUI. This GUI created by **pyQt**.
  - Supervisor: Dr. Jahanshahi [Spring 2017]

- **Implementing Wireless IOT Devices**. Data gathering from **PIR**, **Temperature & Humidity** sensors using **ESP** module.
  - Supervisor: Dr. Sharifian [Spring 2017]

- **Online Food Ordering Website**. Developing and designing an online food ordering website using **HTML**, **CSS**, and **JavaScript** for front-end and **Php** and **mySQL** for back-end of the website.
  - Supervisor: Dr. Bakhshi [Spring 2017]

- **Designing Smoothing Spot Filter**. This filters are used for Amazeing and Noise Reduction and this filter implemented by
  - Supervisor: Dr. Raie [Winter 2016]

- **Designing control system for vertical take off and landing (VTOL) aircraft**. Controlling velocity and break system and rotate direction and Analyzing System Equations using **Matlab** software.
  - Supervisor: Dr. HA. Talebi [Winter 2016]

- **UGV Control & Remote Connection**. Designing electronic board using **Altium Designer** software for reading sensors and motors rpm. Then this board send data to another board that connect to PC using **UDP** protocol.
  - Supervisor: Dr. Abdollahi [Winter 2016]