Amir Hossein Rassafi | Curriculum Vitae

Amirkabir University of Technology

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EDUCATION

- **Master of Science** 2018–Now
  Amirkabir University of Technology *Tehran-Iran*
  - Digital Electronic Systems GPA: 4/4(18.57/20) via 9 credits
- **Bachelor of Science** 2013–2018
  Amirkabir University of Technology *Tehran-Iran*
  - Major: Electrical Engineering(Electronics) GPA: 3.81/4(18.1/20) via 140 credits
  - Minor: Computer Engineering GPA: 3.82/4(18.46/20) via 17 credits

  Thesis : Design and manufacturing a controllable lighting system over internet
- **High School** 2009–2013
  NODET(National Organization for Development of Exceptional Talents) *Qom-Iran*

RESEARCH INTERESTS

- Deep RL
- Deep Learning
- Big data
- IoT

HONORS

- Awarded to continue graduate study (M.Sc. program) at Amirkabir University of Technology(AUT) without participating in university entrance exam due to obtaining high GPA and selected as **elite student**.
- **Ranked 6th** in Electrical Engineering, Electronic Group, among more than 35 students, Amirkabir University of Technology, Tehran, Iran.
- Permitted to study Computer Engineering as a minor (This permission is only awarded to talented students, introduced by the Exceptional Talents Office).
- Granted admission from Talented Student Office of Amirkabir University of Technology for graduate study.
- RoboCup Iran Open 2012(Junior Soccer 2 on 2) 4_{th} place
- Autronic competition (electronic design challenge) 1st level 1st place
- Autronic competition (electronic design challenge) 2nd level 3rd place

SKILLS

Programming Language

- C & C++
- Python
- Java
- VHDL
- Assembly(ARM)
- LaTeX
- HTML & CSS

Technical Softwares

- Matlab
- Vivado & ISE
- Altium
- SolidWorks
- Proteus & LTspice
- Keil uVision
- STM32CubeMX

Programming Env

- Qt Creator
- PyCharm
- NetBeans

DevOps Skills

- Linux
- Docker
- Git

Framework

- TensorFlow and Keras

RELATED COURSES

Advanced Programming	19/20	Probability & Statistics	19/20
DSP	19.5/20	Data Structure	18.3/20
Multimedia Systems	20/20	Computer Network	20/20
Numerical Analysis	19.5/20	Statistical Learning Theory	18.2/20
Differential Equations	19/20	Swarm Intelligence Algorithms	19.5/20

PUBLICATION

SensorDrop: Advantage Actor-Critic Method for Low Communication-Overhead Data Collection (submitted for globecomm 2019 conference-Not answered)

WORK AND TEACHING EXPERIENCES

- **Hardware Software Developer** Spring 2017 - Now
  Barobod Company *Tehran-Iran*
  - Designing a network with LoRa Module for queue management system(like in the bank)
  - Designing an over internet BMS platform based on MQTT protocol(hardware & software)

- **Hardware Software Developer** Spring 2016 - Fall 2016, Spring 2018 - Spring 2019
  Arsam Robotic Company *Tehran-Iran*
  - Designing some mini robot like SSL Robot but controlling them with mix of Vision and GamePad(sth like PES game but with robots)
  - Design hardware and software of wireless controlable robots
    Click here to download UART commands.

- **Teaching Assistant** Fall 2017
  MATLAB TA for DSP0 in AUT at EE department and supervision of Dr Hamid.Sheikhzadeh. *Tehran-Iran*

- **Teaching Assistant** Spring 2019
  Operating systems in AUT at CE department and supervision of Dr Nastooh Taheri Javan. *Tehran-Iran*

- **Teaching Assistant** Spring 2019
  Microcontrollers in AUT at EE department and supervision of Dr Saeed Sharifian. *Tehran-Iran*

SELECTED PROJECTS

- Localization
  - Using ArUco library and ArUco board marker for navigating AGV robot in a room
  - Supervisor: Dr. Abdollahi at Controlling Multi Vehicle System Labratory (CMVS LAB) [Spring 2014]
- Optical Flow
  - Using optical flow (with OpenCV lib) and mouse sensor for fixing place of a quadrotor robot
  - Supervisor: Dr. Abdollahi at CMVS LAB [Fall 2014]
- Plants VS Zombies game
  - Simplified model of Original Plants vs Zombies game with Java (Advanced Programing course)
  - Supervisor: Dr. Noorhosseini [Spring 2015]
- RSSI based Indoor Localization
  - Visualizing Features of RSSI Data and Implmenting Different Methods for Indoor Localization, Statistical Learning Course Project
  - Supervisor: Dr. Pourahmadi [Fall 2018]
- Bellman-Ford Algorithm Simulation
  - An Aplication to Find the Shortest Path From a Vertex to All Other Vertices of a Weighted Graph.
  - Supervisor: Dr. Pourahmadi [Fall 2017]
- BMS (Building Management System).
  - Read temperature and humidity of different parts of building and send with SMS to user with STM32F4, NRF51822 in BLE mode.
  - Supervisor: Dr. Sharifiyan [Spring 2015]
- Path planning.
  - robot path planning simulation with python and genetic algorithm
  - Supervisor: Dr. Sharifiyan [Fall 2018]