

# Seyyede Monireh Mortazavi Azad

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## Summary

Current postgraduate student with an interest in machine learning, neural network and deep learning to address control system engineering issues. Previous work in traffic controlling which has been a multipurpose project involved image processing, traffic engineering base knowledge, simulation and proposing method with multi-agent reinforcement learning.

## Education

### **BU-ALI SINA UNIVERSITY, THE STATE UNIVERSITY OF HAMADAN**

Master of Science, Electrical Engineering-Control system (GPA: 3.42/4.00)

October 2020-present

- Relevant Courses: Machine Learning, System Identification, Fault diagnosis and Fault Tolerant Control, Non-Linear Control, Optimal Control, Multivariable Control

### **HAMADAN UNIVERSITY OF TECHNOLOGY, THE STATE UNIVERSITY OF HAMADAN**

Bachelor of Science, Electrical Engineering-Control system

September 2015- September 2019

- Relevant Courses: Artificial Neural Network, Renewable Energy, Research Methodology

## Experience

- Designed smart control of traffic lights based on traffic density in the multi-intersection network by using reinforcement learning April 2022-present  
Focused on comparing different ways to control, Consisting a wide range of aspects, from simulation and generation traffic flow to the base of control optimization, and reduced waiting time for each car at the intersection of more than 30 percent in comparison traditional traffic light; decreased the queue length of vehicles in multi-intersection with sharing knowledge.
- Simulation of a solar plant with SIMULIN May 2019-June 2019  
Studied the impacts of temperature rise on the efficiency of plant, and the effects of changing in three-phase load; 20° C falling the temperature caused a 7.4 percent rise in output voltage.
- Redesigned an economical Arduino-based tensile tester March 2019- August 2019  
Manufactured an economical tensile tester and monitoring and receiving of information via a Bluetooth module; decreased the cost using industrial tester for students of more than 50 percent.
- Constructed of electric vehicle charging monitoring system in a solar fast charging station. February 2019-September 2019  
Reduced time of battery fully charged of one-third and monitored the process via AVR and solar panels to generate electricity power using by battery.

## Skills

**Analytical Tools:** MS Excel, MS PowerPoint

**Programing Language:** Python, MATLAB, Simulink, Arduino

**Other software:** Fritzing, AVR studio, Sumo Advance English

**Languages:** English C1