Mohammad Mahdi Kalantari

Contact

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Professional Profile

LinkedIn:
https://www.linkedin.com/in/mohammad-mahdi-kalantari-science-enthusiast/

Personal Information

Date of Birth:
1997-12-15

Education

- 2020-Present: M.Sc. in Control and System Engineering at *K.N.Toosi University*, Tehran, GPA(Sem1): 4/4 (19.83/20)
- 2016-2020: Bachelor in Electrical and Electronics Engineering (Major: Control) at *Shahed University*, Tehran, GPA(Overall): 3.6/4 (17.33/20), GPA(2 Years of the Major): 3.9/4 (18.36/20)
- 2015-2016: Pre-university, *Shahid Qoddusi* (a branch of National Organization for Development of Exceptional Talent - NODET), Qom, GPA: 19.13/20
- 2012-2015: High school, *Shahid Qoddusi* (a branch of National Organization for Development of Exceptional Talent - NODET), Qom, GPA: 18.70/20

Teaching Experience

- Teaching assisting in *Linear Algebra* course, *Shahed University*, Spring Semester 2020
- Teaching assisting in *Fundamentals of Programming* course, C++ language, *Shahed University*, Fall Semester 2018
- Teaching Electronics (extracurricular laboratory course) in *Shahid Qoddusi* (a branch of National Organization for Development of Exceptional Talent - NODET), Fall 2016 & Spring 2017

Honors and Awards

- Ranked top10% of the class and 1st in the control major, *Shahed University*, 2019 and 2020
- Ranked 289 among more than 10,000 participants in the National MS Entrance Exam (of Electrical and Electronics) for Iranian Universities, 2020
- *Khwarizmi* Youth Awards
  - "Assessing Alertness by Analysis of Brainwaves with Artificial Neural Network" in Electronics branch and acquiring 4th place, 17th award, 2015
  - "Designing Anemometer Based on NTC Resistors and Bernoulli's Principle" in physics branch and acquiring 6th place, 15th award, 2013
- Participating in *IranOpen* (international RoboCup competitions) for 5 years comprising:
  - Junior Demo by "Conceptual Learning of Robotic Systems by Using Artificial Neural Network" project and acquiring 3rd place (2015)
  - Junior Rescue Secondary (2011 & 2012), ROV (Remotely Operated underwater Vehicle) (2013), Junior Light Weight Soccer (2014)

(Certificates are available upon request)

Project Highlights

- "Controlling an Inverted Pendulum by Reinforcement Learning in OpenAI Environment" as bachelor thesis, Under the supervision of Dr. Manthuri, Shahed University, 2020
- Implementing a face detection program using Robotic Operating System (ROS), Under the supervision of Dr. Manthuri, Shahed University, 2019
- Designing and implementing a variety of RoboCup robots 0 to 100% (comprising mechanics, electronics, coding, and sometimes training Artificial Neural Network), 2011-2015
- Designing and implementing op-amp based EEG and ECG device (without the utilization of relevant convenient modules) for preceding indicated *Khwarizmi* project, 2015

R&D Experiences

- Collaboration with *Blue Light* company in flatbed and printing field for 4 months in R&D which led to designing and producing "High Precision Measurement of Utilized Ink System", Qom, Iran, 2020
- Collaboration with *Blue Light* company in flatbed and printing field for 2 months in R&D which led to invent an optical sensor for protection of the printer's head, Qom, Iran, 2018
- Designing schematic of sorting and separating lines for Saffron Mechanization project, Tehran, 2017
- Collaboration with *Rayan Pazhoohan* company (a well-known company in CNC and Motion Control field in Qom) for 3 months in R&D which led to develop tension control package, 2016

Skill Highlights

Linguistic:
- English: B2
- French: A1
- Persian: Native

Implementation:
- MCU: PIC, AVR, ARM(STM32 Family)
- Compilers: PICC, CodeVisionAVR, Keil
- PCB designing (with some of the EMI-EMC considerations)
- Extensive experience with a variety of external ADCs, sensors, and actuators

General:
- Team working
- Leadership and project management
- Complex problem solving

Computer:
- OS: Windows, Linux
- Office tools: Microsoft Word, Excel, PowerPoint
- Engineering software acquaintance: Pspice, Altium Designer, MATLAB, Proteus, SolidWorks
- Programming languages: C/C++/C# , Python (Intermediate level)

Research Interests

- Perception
- Machine Learning
- Mechatronics and Robotics
- Data Driven Controller

Hobbies and Other Activities

- Literature and poetry
- Chess
- Mountain biking
- Culinary arts

References

- Prof. Hamid D. Taghirad
  Professor at the Department of Electrical Engineering, K.N. Toosi University
  https://aras.kntu.ac.ir/taghirad/
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- Prof. Mohammad Manthouri
  Assistant Prof. at the Department of Engineering, Shahed University
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