Saeed Bazargan

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Education

Qazvin I. Azad University (QIAU)   *Qazvin, Iran*
MASTER OF SCIENCE IN DIGITAL ELECTRONICS   *January 2021 - Present*
- **Department Of Electrical, Computer, and Biomedical Engineering**

Qazvin I. Azad University (QIAU)   *Qazvin, Iran*
BACHELOR OF ENGINEERING IN ELECTRICAL ENGINEERING   *December 2016 - January 2021*
- **Department Of Electrical, Computer, and Biomedical Engineering**
- CGPA: 14.30/20 (3.06/4.0)

Zanjan I. Azad University   *Zanjan, Iran*
ASSOCIATE DEGREE IN ELECTRICAL ENGINEERING   *January 2013 - May 2015*
- **Department Of Electrical and Computer Engineering**
- CGPA: 16.76/20 (3.55/4.0)

Research Interest

- Robotics
- FPGA
- Embedded Systems
- PCB Design
- Radio Frequency

Research Experience

Iran Electricity Meter Manufacturing Company (SKI)   *Qazvin, Iran*
RESEARCH DEVELOPMENT ELECTRONIC ENGINEER   *August 2023 - Present*

FreeLancer   *Qazvin, Iran*
IoT RESEARCHER   *July 2022 - June 2023*
- Designed and implemented a **GSM** circuit to control smart home relays using **Sim800.**
- Drive a DC motor made by a Turkish company called Kormas using a high-power relay.
- Recognize the floor of a roller where a product is located using a button method and **Ethernet** transmission.
- Design an **Ethernet to RS-485** protocol converter, which was done by Wiznet W5500.
- Designed a custom career board for the **STM32F103** Nucleo microcontroller.
- Programmed an AVR microcontroller using C language to develop a **GSM** circuit, utilizing **USART** for data communication and control of smart home relays.
- Developed a custom software application using C#.NET to enable an Xbox360 or PlayStation joystick to function as a computer mouse.
- Developed a custom software application using C#.NET and **OpenCV** to capture video streams from multiple cameras simultaneously. Utilized multi-threading techniques to efficiently manage data processing and ensure smooth video playback.

Mechatronic Research Laboratory (MRL) - Humanoid Soccer Robot League   *Qazvin, Iran*
ELECTRONIC RESEARCHER   *August 2016 - Present*
- Design a modified version of the USB2Dynamixel (USB2DXL) board, which is the interface between the Dynamixel actuators and the controller. This board is designed to communicate with both **TTL and RS-485** Dynamixel series at the same time.
- Developed communication with Dynamixel actuators using the **UART** interface and queue algorithms in the humanoid robot's platform, effectively dividing communication into 5 independent lanes.
- Configured BNO055 and MPU9250 IMU sensors using **FreeRTOS** and the queue method to efficiently manage data processing. Utilized STM32F405 microcontroller and HAL to optimize the system's performance and reliability. and transfer via USB to **UART** converter.
- Managed the electronic section of a robotics team, overseeing tasks such as project planning, task management, and recruitment of new members. Conducted thorough testing and debugging to ensure the reliable operation of the electronic systems.

Zanjan Sama Robotic Group (ZSR) *Zanjan, Iran*

Electronic Researcher *November 2008 - February 2014*

- Programming and designing the Mars-rover robot's mainboard using an **Atmega128** microcontroller. Utilizing its high-power DC Motor, we were able to control them and perform tasks such as digging.
- Implemented object detection and manipulation in an Omni-Directional **Festo Mobile robot** using C#.NET programming language. I was responsible for recognizing shapes and placing objects in the correct location.
- Designing and programming rescue robot's board. It is similar to a follow-line robot, but there are obstacles in the path that the robot needs to overcome.

Publication

MRL Team Extended Abstract for Humanoid Kid Size League of RoboCup 2023 *Bordeaux, France*

The 26th International RoboCup Symposium. *July 2023*

- Hamed Mahmudi, **Saeed Bazargan**, Arash Rahmani, Abolfazl Ashayeri, Fatemeh Rashnozadeh, Alireza Golchin, Ramtin Kosari, Sina Khoshzaban Khosroshahi, Mehdi Zeinali and Maryam Shaban

MRL Champion Team Paper in Humanoid TeenSize League of RoboCup 2019 *Sydney, Australia*

Springer *July 2019*

- Meisam Teimouri, Hamed Mahmudi, Amir Gholami, Mohammad Hossein Delavaran, Soheil Khatibi, **Saeid Bazargan**, Milad Moradi, Bita Alaee, Arash Rahmani, Kazem Firouzmandi Bandpey, Peyman Fallahzadeh

Skills

Programming and Libraries	MATLAB, Python, C Programming Language, C#.NET, LaTeX, OpenCV, Python Libraries
Software and Tools	Altium Designer, Circuit Maker, Micro Vision Keil(ARM), STM32CubeIDE, CodeVision(AVR), Git(familiar)
Languages	Persian (Mother Tongue), English (Foreign Language)
Soft Skills	Easily Get Into Teams, Time Management, Problem Solving, Self-learning.

Honors

First place in Humanoid Soccer Robot League, International Robotic Competition 2023 *Tehran, Iran*

The 17th IranOpen RoboCup. *April 2023*

Second place in Humanoid Soccer Robot League, Robocup Competition 2021 *Bordeaux, France*

RoboCup Federation *July 2021*

First place in Humanoid Soccer Robot League, Robocup Competition 2019 *Sydney, Australia*

RoboCup Federation *July 2019*

First place in Humanoid Soccer Robot League, International Robotic Competition 2018 *Kish, Iran*

The 15th IranOpen RoboCup. *October 2018*

Second place in Humanoid Soccer Robot League, Robocup Competition 2018 *Montreal, Canada*

RoboCup Federation *July 2018*

First place in Humanoid Soccer Robot League, RoboCup Asia-Pacific 2017 *Bangkok, Thailand*

RoboCup Federation *October 2017*

Third place in Manually Quadcopter League, International Robotic Competition 2013 *Tehran, Iran*

AUTCup RoboCup *November 2013*

Scholarships

Qazvin I. Azad University (QIAU)   *Qazvin, Iran*

Research Scholarship   *May 2019 - September 2023*

- Half tuition scholarship for undergraduate studies