

Saeed Bazargan

Linkedin
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Experiences

- Embedded Systems Engineer**, TOSAN TECHNO, Qazvin, Iran (November 2023 - Present)
- Integrated real-time orientation classification on ESP32 using TFLite Micro and FreeRTOS.
 - Optimized neural network performance for AI-based sine wave generation on embedded hardware.
 - Implemented a Cortex-M bootloader with RSA-2048 encryption, reducing boot time and enhancing security.
 - Increased data capture reliability by 40% through a FreeRTOS-based data logger using UART and an SD card.
- Electronic Researcher**, Mechatronic Research Laboratory (MRL), Qazvin, Iran (August 2016 - April 2024)
- Enhanced mobile-robot control efficiency by 45% with ESP32 and Micro-ROS.
 - Designed a USB2Dynamixel board supporting TTL/RS-485, reducing actuator integration time.
 - Optimized UART communication with FIFO handling, boosting data throughput by 25%.
 - Refined IMU sensor performance (BNO055, MPU9250) with SPI and FreeRTOS for higher accuracy.
 - Led the electronics team, completing three projects on time and within budget.
- Freelancer**, Qazvin, Iran (July 2022 - June 2023)
- Created Ethernet to RS-485 converter, reducing integration time 90% for industrial systems.
 - Minimized CPU load 30% in multi-camera video capture using C#.NET and OpenCV with multi-threading.
 - Enabled seamless IoT connectivity by integrating Quectel EC200 4G/2G modules, improving data transfer speed.
- Electronic Researcher**, Zanjan Sama Robotic Group (ZSR), Zanjan, Iran (November 2008 - February 2014)
- Improved Mars-rover control with Atmega128 mainboard for DC motor control.
 - Boosted object recognition accuracy 15% with C#.NET-based detection for Festo Robot.
 - Achieved 90% autonomy in rescue robots with obstacle and line-following navigation.

Publication

- MRL Team Extended Abstract for Humanoid Kid Size League of RoboCup 2023**, Bordeaux, France (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 (July 2019)
- Meisam Teimouri, Hamed Mahmudi, Amir Gholami, Mohammad Hossein Delavaran, Soheil Khatibi, **Saeid Bazargan**, Milad Moradi, Bitia Alaei, Arash Rahmani, Kazem Firouzmandi Bandpey, Peyman Fallahzadeh

Skills

- **Programming and Libraries**
- C programming, C#.NET, Python, FreeRTOS, TFLite, Micro-ROS, OpenCV, LaTeX
- **Software Tools**
- Altium Designer, STM32CubeIDE, CodeVision(AVR), FreeCad, Doxygen, Git
- **Hardware and Protocols**
- ARM, AVR, ESP32, SPI, I2C, UART, RS485, RS232, GSM, Ethernet, GPS
- **Languages**
- Persian (Native), English (Proficient)
- **Soft Skills**
- Task Prioritization, Team Collaboration, Time Management, Problem Solving, Self-Learning

Education

- **MSc. Electrical Engineering**, Qazvin I. Azad University (QIAU), Iran (2021-2025)
- **BSc. Electrical Engineering**, Qazvin I. Azad University (QIAU), Iran (2016-2021)

Honors

- **RoboCup** — (2017-2021)
- 2nd Place, Humanoid League, Bordeaux, France
- 1st Place, Humanoid League, Sydney, Australia
- 2nd Place, Humanoid League, Montreal, Canada
- 1st Place, Humanoid League, Bangkok, Thailand
- **IranOpen** — (2017-2023)
- First Place, Humanoid League, Tehran, Iran, 2023
- First Place, Humanoid League, Kish, Iran, 2018
- Second Place, Humanoid League, Tehran, Iran, 2017