Saeed Bazargan

Linkedin

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Experiences

Embedded Systems Engineer, TOSAN TECHNO, Qazvin, Iran   (November 2023 - Present)
- 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 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 by 20% 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, Bita Alaee, Arash Rahmani, Kazem Firouzmandi Bandpey, Peyman Fallahzadeh

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Skills
- **Programming and Libraries**
- C programming, C#.NET, Python, LaTeX, OpenCV, FreeRTOS, TfLite, Micro-ROS
- **Software Tools**
- Altium Designer, Circuit Maker, Keil(ARM), STM32CubeIDE, CodeVision(AVR), CMake, 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

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