

Ali Javadi

Curriculum Vitae

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Education

- 2023–Present **PhD of Computer Architecture**, Iran University of Science and Technology, Tehran, Iran, Under Supervision of Dr. Amir Mahdi Hosseini Monazzah.
- 2020–2023 **Masters of Computer Architecture**, Iran University of Science and Technology, Tehran, Iran, Under Supervision of Dr. Amir Mahdi Hosseini Monazzah.
- 2015–2019 **Bachelor of Computer Software Engineering**, Semnan University, Semnan, Iran.

Ph.D. Thesis

- Title *Providing a Cross-layer PIM-Enabled Architecture (for a specific application)*
- Supervisors Dr. Amir Mahdi Hosseini Monazzah, Dr. Ahmad Akbari Azirani

Masters Thesis

- Title *Providing an Efficient Task Offloading Algorithm in Fog Computing Applications*
- Supervisors Dr. Amir Mahdi Hosseini Monazzah
- Description We Have Presented FACT as a Solution Using Reinforcement Learning Algorithms to Improve Task Offloading Destination Determination, Resulting in a 19.04% Improvement in Task Hit Ratio and Reduction of Task Lateness Compared to Other Methods.

Research Interests

1. **Memory Systems.**
2. **In Memory Computing.**
3. **Fault-tolerant Design.**
4. **Internet of Things.**
5. **Fog Computing Infrastructures.**
6. **Embedded Systems.**
7. **Low-power Design.**
8. **Reinforcement Learning.**

Honors & Awards

1. **Awarded the prestigious Alborz Prize (2025), Iran's oldest and most competitive national scientific award, presented by the Alborz Cultural Foundation, recognizing distinguished talent among the nation's elite.**
2. **Ranked 4th in Ph.D. Computer Architecture Entrance Exam.**
3. **Recognized as an outstanding student at Iran University of Science and Technology for achievements in education, culture, research, technology, and sports.**

Skills & Abilities

Programming Languages C++, C, PYTHON, VERILOG HDL, VHDL, SYSTEMC

Tools ALTIUM DESIGNER, COOJA, MODELSIM, HDL DESIGNER, MATLAB & SIMULINK, HSPICE, GEM5, LABVIEW, CLOUDSIM, IFOGSIM

Software L^AT_EX, ICDL, AUTOCAD

Intermediate L^AT_EX, OpenOffice, Linux, Microsoft Windows

Advanced Computer Hardware

Teaching

2023-Present **Computer Architecture Laboratory**, LECTURER, Iran University of Science and Technology.

2025-Spring **Storage Systems**, TEACHER ASSISTANT, Iran University of Science and Technology, Under Supervision of Dr. Amir Mahdi Hosseini Monazzah.

2022-Fall **Design of Fault-tolerant Systems**, TEACHER ASSISTANT, Iran University of Science and Technology, Under Supervision of Dr. Amir Mahdi Hosseini Monazzah.

2020-Present **Embedded and IoT Systems**, TEACHER ASSISTANT, Iran University of Science and Technology, Under Supervision of Dr. Amir Mahdi Hosseini Monazzah.

2023-Fall **Advanced Computer Architecture**, TEACHER ASSISTANT, Iran University of Science and Technology, Under Supervision of Dr. Pejman Lotfi-Kamran.

2020-Fall **Computer-aided Design**, TEACHER ASSISTANT, Iran University of Science and Technology, Under Supervision of Dr. Hajar Falahati.

2020-Fall **Microprocessor and Assembly Language**, TEACHER ASSISTANT, Semnan University.

2020-Fall **Interface Circuits Design**, TEACHER ASSISTANT, Semnan University.

2019-Fall **Digital Systems Design**, TEACHER ASSISTANT, Semnan University.

2019-Fall **Artificial Intelligence**, TEACHER ASSISTANT, Semnan University.

2019-Fall **Robotics Workshop**, LECTURER, Semnan University.

2019-Fall **ARM Workshop**, LECTURER, Semnan University.

Working Experience

- Summer 2023 **CEO and Founder**, CYBER PHYSICAL PIONEERS(METABLE), Tehran, Iran.
- Summer 2023 **Visiting Lecturer**, IRAN UNIVERSITY OF SCIENCE AND TECHNOLOGY, IUST, Tehran, Iran.
- Summer 2021 **Technical Consultant**, IRAN SMALL INDUSTRIES AND INDUSTRIAL PARKS ORGANIZATION, ISIPO, Tehran, Iran.
Freelancer

Publications

Please check my google scholar page for an up to date list of my publications

H. Pourrahmani, A. Javadi, A.M.H. Monazzah, J.V. Herle a “Real-time H₂S detection kit for hydrogen fuel cell”, Heliyon, Elsevier.

M. Aliazam, A. Javadi, A. M. Hosseini Monazzah and A. Akbari Azirani, “MAPS: Energy-Reliability Tradeoff Management in Autonomous Vehicles Through LLMs Penetrated Science,” 2024 5th CPSSI International Symposium on Cyber-Physical Systems (Applications and Theory) (CPSAT), doi: 10.1109/CP-SAT64082.2024.10745445.

Y. Seraj, S. Fadaei, B. Safaei, A. Javadi, A. M. H. Monazzah and A. M. A. Hemmatyar, “LIMO: Load-balanced Offloading with MAPE and Particle Swarm Optimization in Mobile Fog Networks,” 2024 5th CPSSI International Symposium on Cyber-Physical Systems (Applications and Theory) (CPSAT), doi: 10.1109/CP-SAT64082.2024.10745445.

A. Javadi, A.M.H. Monazzah, “Fuzzy Assisted Machine Learning Based Computation Offloading Scheme for Internet-of-Things Infrastructure”, Submitted to Internet of Things Journal

A. Javadi, A.M.H. Monazzah, Investigating the Use of Energy Harvesters for Wireless Sensor Networks, the 4th National Informatics Conference, 2023, Iran

M. Aliazam, A. Javadi, A.M.H. Monazzah, Investigating the Ways of Increasing Reliability and Accessibility in Fog-based Health Care Systems, the 28th International Conference of Computer Society, 2023, Iran

A. Javadi, Z. Naderi, A.M.H. Monazzah, Investigating the Effects of RPL Objective Functions in Energy Harvesting of Thermoelectric Sensors, Journal of Computer Science, 8(3), 2024, Iran

Accomplished Projects

- 2023 **Vending Machine Controller.**
Metable Co.
- 2022-Present **PATRIIoT IoT Platform, Project Manager.**
Metable Co.
- 2023 **LoRa AccessPoint Development.**
Metable Co.

- 2022 **Design and Manufacture of Hydraulic Mobile Lifting Jack Controller Board.**
Parizan Sanat Co.
- 2021 **Design and Manufacture Control Board of Hydraulic Tensile Testing Machine.**
Khak Pey Arvin Co.
- 2020 **Design and Implementation of Intelligent GreenHouse Control System.**
Pooya Fanavaran Energy Qumis Co.
- 2020 **Namak Smart Librarian.**
Semnan Book Capital Secretariat
- 2020 **Design and Implementation of Car Tracker.**
Parsian Lotus Khavarmianeh Co.
- 2019 **Solar Panel Angle Control Circuit.**
Fanavar Hamrah Houshmand Ofoq Co.
- 2019 **Intelligent Controller of the Air Conditioning System.**
Tahviah Gostar Arvan Co.
- 2018 **Rack Monitoring System.**
Kumeshian Part Pishrafte Co.

Languages

Farsi **Native Speaker**
English **Fluent**