

Ali Vaziri

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Research Interests

My research focuses on AI-driven signal processing and optimization, especially in complex engineering and computational systems. I am particularly interested in using AI techniques to improve signal analysis, decision-making, and system performance across different fields like healthcare, communications, and control systems.

Education

Stevens Institute of Technology, MS in Software Engineering Sep 2023 – May 2025

- **Certificate:** Data Exploration and Visualization for Risk and Decision Making
- **Project:** CommitPro extension | Advisors: Dr. Lu Xiao & Dr. Eman AlOmar
- **Coursework:** Decision and Risk Analysis, Decision Making Via Data Analysis Techniques, Data Science and Knowledge Discovery, Software Architecture and Component-Based Design, Software Testing Quality Assurance and Maintenance

Azad University, BS in Computer Engineering Sep 2017 – Jul 2022

- **GPA:** 3.80/4.00
- **Project:** Cloud Computing | Advisor: Dr. Mehdi Alirezanejad
- **Coursework:** System Analysis and Design, Signals and Systems, Computer Architecture and Logical Circuits, Object-Oriented Design of Systems, Human-Computer Interaction, Theory of Languages and Machines, Industrial Automation Systems, Artificial Intelligence and Expert Systems, Data Structure

Publications

A New Algorithm for Indoor Robot Localization using Turning Function Dec 2024

Pardis Sadatian Moghaddam, *Ali Vaziri*, Anita Ershadi Oskouei

10.22034/cmde.2024.64173.2895

Development of Service Compositions in Cloud Manufacturing Processes Based on System Sustainability Components Jan 2024

Ali Vaziri, Pardis Sadatian Moghaddam, Anita Ershadi Oskouei

10.52783/jes.6257

Identification and Detection of Ferroresonance Phenomenon in Active Distribution Networks Using Long Short-Term Memory Neural Networks Enhanced by Genetic Algorithm Under Preparation

Anita Ershadi Oskouei, *Ali Vaziri*, Pardis Sadatian Moghaddam

Energy-Efficient Secure Cell-Free Massive MIMO for Internet of Things: A Hybrid CNN-LSTM-Based Deep Learning Approach Under Preparation

Ali Vaziri, Pardis Sadatian Moghaddam

Experience

Graduate Assistant at English Language Communication center (ELC), Stevens Institute of Technology Oct 2023 – Present

- Advisor: Dr. Samaneh Jafari
- Assisted international students in improving English communication skills and facilitated lab sessions.

Research Assistance at Brain-Computer Interface lab, Stevens Institute of Technology Nov 2024 – Feb 2025

- Advisor: Dr. Feng Liu
- Conducted research on EEG signal processing and brain-computer interfaces.

Research Assistance at Software Engineering club, Stevens Institute of Technology

Jun 2024 – Jul 2024

- Advisor: Dr. David Darian Muresan
- Developed a software solution using the FTDI 245R chipset to convert user-inputted text into visual patterns on an oscilloscope, integrating signal processing and hardware communication techniques.

Software Developer (internship), Bordbaar Intelligent Transporters

Feb 2022 – Jul 2023

- Designed and developed a mobile application for on-demand goods and heavy truck transportation, enhancing logistics efficiency and fleet management.

Research Assistance at Department of Electronics, Sharif University of Technology

Jul 2020 – Aug 2021

- Advisor: Dr. Iman Gholampour
- Developed and optimized algorithmic models for drones using C# in a Ubuntu environment.

Technologies

Languages: Assembly, C, C++, C#, Java, Python, SQL

Technologies: .NET, Microsoft SQL Server, AWS, Pandas, Matlab