Ali Vaziri

New Brunswick, NJ, USA | ali.vaziri@rutgers.edu | 201-233-0400
LinkedIn: alivaziri-career | Blog: alivaziri1999.github.io | GitHub: AliVaziri1999

Summary

I'm interested in research that connects data-driven modeling, optimization, and autonomous systems. I focus on building scalable algorithms for robotics and dynamical systems, where I've tackled challenges in collective behavior and wireless networks. In my previous work, I combined deep learning with control theory to capture complex interactions and design more efficient autonomous systems.

Education

M.Sc. Statistics - Data Science, Rutgers University - New Brunswick *Sep 2025 – Present*

- Coursework: Probability and Statistical Inference, Data Structures and Algorithms, Regression and Time Series Analysis, Linear Algebra, Calculus.

M.Sc. in Software Engineering, Stevens Institute of Technology *Sep 2023 – May 2025*

- Certificate: **Data Exploration and Visualization for Risk and Decision Making**
- Master's GPA: 3.66 | Certificate's GPA: 3.83
- 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, Agile Methodology

B.Sc. in Computer Engineering, Azad University *Sep 2017 – Jul 2022*

- GPA: 3.80
- 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

Research Interests

Data Science Optimization Robotics & Autonomy Control Theory Dynamical Systems

Publications

Energy-efficient secure cell-free massive MIMO for internet of things: a hybrid CNN–LSTM-based deep-learning approach *Apr 2025*
A. Vaziri, P. S. Moghaddam, M. Shoeibi, and M. Kaveh.
Future Internet, vol. 17, no. 4
DOI: https://www.mdpi.com/1999-5903/17/4/169

A new algorithm for indoor robot localization using turning function *Nov 2024*
P. S. Moghaddam, A. Vaziri, and A. Ershadi Oskouei.
Comput. Methods Differ. Equ.
DOI: 10.22034/cmde.2024.64173.2895

Development of service compositions in cloud manufacturing processes based on system sustainability components *Dec 2023*
A. Vaziri, P. S. Moghaddam, and A. Ershadi Oskouei.
J. Electrical Systems, vol. 19, no. 4
DOI: doi.org/10.52783/jes.6257

Research & Technical Experience

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

Built preprocessing pipelines for seizure pattern detection, aligning with a data-driven system for noisy biological signals.
Advisor: Dr. Feng Liu

Research Assistance at Software Engineering club, Stevens Institute of Technology *Jun 2024 – Jul 2024*

Implemented I/O and waveform generation logic; designed experiments for mapping user inputs to dynamical outputs (signal shaping).
Advisor: Dr. David Darian Muresan

Research Assistance at Department of Electronics, Sharif University of Technology *Jul 2020 – Aug 2021*

Developed and optimized flight models for a drone.
Advisor: Dr. Iman Gholampour

Job Experience

Graduate Assistant at ELC center, Stevens Institute of Technology *Oct 2023 – May 2025*

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

Software Developer (internship), Bordbaar Intelligent Transporters *Feb 2022 – Jul 2023*

- Designed and developed a mobile application for on-demand goods and heavy truck transportation.

Awards & Honors

Graduate Scholarship – Stevens Institute of Technology *Sep 2023 – May 2024*

Computer Skills

Programming Languages: C, C++, C#, Java, Python, MATLAB, R
Tools: Git, SQL, VS Code, Jupyter, Pandas, Matplotlib, TensorFlow, LaTeX

English Proficiency

GRE: 328 (Q: 167, V: 161, W: 3.0)

References

Dr. Feng Liu
Assistant Professor, Department of Systems Engineering, Stevens Institute of Technology.
201-216-8009
fliu22@stevens.edu

Dr. Carlo Lipizzi
Teaching Associate Professor, Department of Systems Engineering, Stevens Institute of Technology.
201-216-3303
clipizzi@stevens.edu

Dr. David Darian Muresan
Teaching Professor, Department of Systems Engineering, Stevens Institute of Technology.
201-216-3721
dmuresan@stevens.edu

Dr. Samaneh Jafari
Director of the English Language Communications center, Stevens Institute of Technology.
201 216 3595
sjafari@stevens.edu