

# MILAD RABIEI

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## Education

**Università degli Studi di Genova, Italy**  
Master of Science, Robotics Engineering, DIBRIS

2024 - Present

**Shahid Beheshti University, Iran**

2019 - 24

Bachelor of Science, Electrical Engineering, ECE Department, CGPA (3.4/4.0)  
Thesis: Landmark Tracking and Object Detection, Complete Vision System for Self-driving Cars (4/4)

## Experience

**Cyberspace Research Institute, SBU - Research Assistant**

2022 - 24

- Supervisors: [Dr. Vahideh Moghtadaiee](#) and [Dr. Mina Alishahi](#)
- Generative networks, private data analysis, differential privacy, federated learning

**Robotics and Intelligent Automation Lab, SBU - Research Assistant**

2020 - 23

- Supervised by: [Dr. Mohammad Hossein Moaiyeri](#)
- Vision for AGVs (level 4), segmentation, detection, and localization in complex environments

**ECE Department, SBU - Lead Teaching Assistant**

2021 - 24

- Machine Learning (grad-level), [Dr. Reza Ghaderi](#)
- Intro to Artificial Intelligence (grad-level), [Dr. Atefeh Aghaei](#)
- Computer Programming, [Dr. Vahideh Moghtadaiee](#)

## Publications

**Mutual Impact of Feature Selection and Privacy-preserving Mechanisms**

Submitted @ Pervasive and Mobile Computing, [Arxiv](#), 2025  
M Alishahi, V Moghtadaiee, A Fathalizadeh, Milad Rabiei

**Differentially Private GANs for Generating Synthetic Indoor Location Data**

Accepted @ International Journal of Information Security, [Springer](#), 2025  
V Moghtadaiee, M Alishahi, Milad Rabiei

**An Optimized Density-Based Lane Keeping System for A Cost-Efficient Autonomous Vehicle Platform**

Manuscript, [Arxiv](#), 2023  
Younesi\*, F., Keivanfard\*, S., Milad Rabiei\*, Sharifi\*, M., GhayourNajafabadi, M., Moadeli, B., Jafari, A., Moaiyeri, M. H.

## Skills

**Programming/Frameworks:** Python (OpenCV, PyTorch, TF/Keras, etc.), C/C++, MATLAB, Lua, ROS Noetic, ROS 2, Gazebo

**Embedded:** Nvidia Jetson (CUDA), Raspberry Pi, Arduino Family, NodeMCU ESP8266, ESP32

**Language:** Persian, English (C1) IELTS (Feb 2023) Test Result: 7.5 - L(8.5), R(8), W(7), S(7)

## Honors and Awards

(2023) Recipient of MCI R&D research grant for small-size autonomous vehicle  
(2022) Recipient of honorary Dean and Departmental research grants for Robotics Lab at SBU  
(2022) 1st place, Individual team section, Autonomous vehicles league, IranOpen RoboCup 2022  
(2022) 1st place, Technical challenge, Autonomous vehicles league, IranOpen RoboCup 2022  
(2021) 2nd place, Race section, Autonomous cars simulation, Fira RoboWorld Cup SDE  
(2021) 1st place, Race section, Autonomous cars simulation, Iran Fira RoboWorld Cup  
(2021) 2nd place, Urban section, Autonomous cars simulation, Iran Fira RoboWorld Cup  
(2019) Top 99th percentile in national university entrance exam among 140K participants

## Other Experiences

(2024) Member of National Committee, [IranOpen RoboCup International Competitions](#)  
(2023) Member of Technical Committee, [IranOpen RoboCup International Competitions](#)  
(2020-23) Computer Vision and AI Developer, [SBU Robotics Team \(Auriga\)](#)  
(2023) Machine Learning Course Instructor, [Iran RoboCamp](#), Tehran  
(2023) Organizer of Deep Learning Reading Group, SBU ECE Department  
(2022) Conference Coordinator: The 4th Iranian International Conference on Microelectronics ([IICM](#)), SBU, Tehran  
(2022) Conference Coordinator: The 13th Power Electronics and Drives: Systems and Technologies Conference ([PEDSTC](#)), SBU, Tehran  
(2022) Network Programming and SDN Intern, Amin Optical Communications Technologies (FANA), Tehran

## Tools and Projects

[Drone Simulation with Remote Access](#): This project is an interactive drone simulation that operates in a terminal-based environment using Ncurses. It can be used extensively for path-planning of drones with respect to avoidable regions.

[Q-Learning for Cartpole in Gym](#): Discretization of the state space for tabular Q-learning, exploration-exploitation trade-off with epsilon-greedy, and visualization of agent performance through reward plots and environment renders.

[Analysis of Private Data Generation](#): A comprehensive study of privacy-preserving techniques, generative networks, and feature selection.

[1:10 Scale Self-driving Car](#): Design and implementation of a novel area-oriented segmentation algorithm for lane tracking, image segmentation, and landmark localization.

[ODS](#): Image sample creation/augmentation code for object detection with specific classes.

[Face/Hand Gesture Detection](#) — [GAN/Conditional GAN for MNIST Dataset](#) — [Click to Plot](#) — [Ball Balancer with PID](#) — [Image Recovery with Genetic Algorithm](#) — [Sobel Edge Detection in VHDL](#)

## References

Dr. Mohammad Hossein Moaiyeri   Associate Professor, Shahid Beheshti University, Iran, [Mail](#), [Scholar](#)  
Dr. Reza Ghaderi   Associate Professor, Shahid Beheshti University, Iran, [Mail](#), [Scholar](#)  
Dr. Mina Alishahi   Assistant Professor, Open Universit t, The Netherlands, [Mail](#), [Scholar](#)  
Dr. Vahideh Moghtadaiee   Assistant Professor, Shahid Beheshti University, Iran, [Mail](#), [Scholar](#)  
Dr. Atefe Aghaei   Assistant Professor, Shahid Beheshti University, Iran, [Mail](#), [Scholar](#)