MILAD RABIEI

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Education

Università degli Studi di Genova, Italy *2024 - Present*
Master of Science, Robotics Engineering, DIBRIS

Shahid Beheshti University, Iran *2019 - 24*
Bachelor of Science, Electrical Engineering, ECE Department
Thesis: "Landmark Tracking and Object Detection, Complete Vision System for Self-driving Cars"

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, Preprint, 2024
M Alishahi, V Moghtadaiee, A Fathalizadeh, Milad Rabiei

Differentially Private GANs for Generating Synthetic Indoor Location Data
Revise and resubmitted @ International Journal of Information Security, Arxiv, 2024
V Moghtadaiee, M Alishahi, Milad Rabiei

An Optimized Platform for Cost-efficient Density-based Tracking Systems
Manuscript, Google Drive, 2022
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 4th, 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, Iran
(2023) Organizer of Deep Learning Reading Group, SBU ECE Department
(2022) Conference Coordinator: The 4th Iranian International Conference on Microelectronics (IICM 2022), SBU, Tehran, Iran
(2022) Conference Coordinator: The 13th Power Electronics and Drives: Systems and Technologies Conference (PEDSTC 2022), SBU, Tehran, Iran

Tools and Projects

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 Universität, 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

inquiries accepted.