Milad Soltany Kadarvish

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Education

Iran University of Science and Technology Tehran, Iran
BSc in Electrical Engineering - Control 2016–2021 (Expected)

- Total CGPA: 3.67/4, (16.97/20)
- CGPA via last 60 credits: 3.89/4, (18.16/20)
- Thesis: Design, Simulation, And Construction of An Autonomous Vehicle with Environment Perception, Planning, and Control Capabilities (Mark: 20/20) (April 2021 - August 2021)

Publications

1. [Under peer review] **M. Soltany Kadarvish**, H. Mojtahedi, H. Entezari Zarch, A. Kazerouni, A. Morsali, A. Abtahi and F. Marvasti, "Ensemble Neural Representation Networks", *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), October 2021*

Research Interests

- Artificial Intelligence
- Computer Vision
- Deep Learning
- Autonomous Driving
- GANs
- Machine Learning

Experience

Research Experience

- *AI and Control Lab, Iran University of Science and Technology*
  - AI Researcher — Summer and Fall 2020
- *Artificial Intelligence and Robotics (AIR) Center*
  - Co-Founder, Instructor and Mentor — July 2020 - Present

Teaching Experience

- *Teaching Assistant at Iran University of Science and Technology*
  - Mechatronics Course — Winter 2021 (3992 Semester)
- *Course Instructor at AIR Center*
  - Introduction to Deep Learning Course — Winter 2021
  - Zero to Hero Python Bootcamp — Fall 2021
- *Course Mentor at AIR Center*
  - Zero to Hero Data Science and Machine Learning Course — Fall 2021
  - Zero to Hero Python Bootcamp — Summer 2020

Awards and Honors

- Ranked 2nd Team in FIRA Competitions in Autonomous Cars League (Race Section) — Winter and Spring of 2021
- Ranked 3nd Team in FIRA Competitions in Autonomous Cars League (Urban Section) — Winter and Spring of 2021
- Ranked 1st Team in the National Rahneshan Competitions for Autonomous Vehicles — Fall 2020 - Winter 2021
- Ranked 2nd Team Among More than 140 Teams in National Data-Days Competitions — Winter 2020
- Ranked 68th (99th percentile) in National University Entrance Exam for Mathematics and Physics — Summer 2017
- Ranked 28th (99th percentile) in National University Entrance Exam for Foreign Languages — Summer 2017
- Top Student for 6 Consecutive Semesters at the ILI (Iran Languages Institute) — 2014-2015

Academic Projects

Major Projects

- Design, Simulation, And Construction of An Autonomous Vehicle with Environment Perception, Planning, and Control Capabilities (Bachelor's thesis)
- Unauthorized Load Detection Using Stereo Cameras (2020 - 2021)
- Fully Autonomous Vehicle (Based on AVIS engine) (May-July 2020)
- Smart Library with Gesture Recognition and Visual Book Identification (June-August 2020)
- Online Ad-Recommender System (Jan - March 2020)

Minor Projects

- In-depth analysis and implementation of a CGAN
- Implementing a fully-connected neural network from scratch using no libraries
- Depth-estimation using SGBM
- Sentiment analysis on the Sentiment140 dataset
- Face Detection using YOLO
- Face recognition using a Siamese neural network
- Street sign dataset collection
- Background subtraction for highway videos using classic computer vision and deep learning
- Pseudo-random number generator for various distributions using no libraries
- Ultrasonic distance measurement with visual and bluetooth output (Linear Algebra project)

Computer Skills

- Python / Python libraries
  - NPM
  - OpenCV
  - Scikit-Learn
  - Keras
  - PyTorch
  - Tensorflow
- Git
- Arduino, AVR
- Matlab
- C/C++
- Latex
- CodeVision AVR

Online Courses

- GANs Specialization, Coursera
- Python Zero to Hero Bootcamp, Udemy
- Neural Networks and Deep Learning, Coursera
- Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization, Coursera
- Convolutional Neural Networks, Coursera
- Structuring Machine Learning Projects, Coursera
- Sequence Models, Coursera
- Introduction to Self-Driving Cars, Coursera
- Tensorflow in Practice Specialization, Coursera

Languages

- *English*: C2 Proficiency
  - L(8.5), R(8.5), S(8), W(7.5). **Overall (8)** Exam Date: 20 Sep, 2021
- *Kurdish*: Native
- *Persian*: Native

References

- **Dr. Saeed Shamaghdari**

  Assistant Professor at Iran University of Science and Technology

  Director of AI and Control Lab, Iran University of Science and Technology

  Email: shamaghdari@iust.ac.ir

- **Dr. Saeed Ebadollahi**

  Assistant Professor at Iran University of Science and Technology

  Robotics Committee chairman

  Email: s_ebadollahi@iust.ac.ir