

Seyed Soroush Hosseini Naghavi

SCIENCE AND RESEARCH BRANCH OF IAU · DEPARTMENT OF COMPUTER ENGINEERING

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RESEARCH INTERESTS

- Machine Learning
- Deep Learning Optimization and Efficiency
- Image Processing
- Neural/Brain Imaging and Neuroscience
- Signal Processing

EDUCATION

Science and Research Branch IAU

Tehran, Iran

BACHELOR OF SCIENCE IN COMPUTER ENGINEERING | GPA: 16.04/20 VIA 129 UNITS

Sept. 2019 - Present

- MGPA: 3.55/4 via 78 units
- Related courses:
 - Advanced Topics 01 - Neural Networks: 20/20
 - AI and Expert Systems: 18/20
 - Algorithm Design: 17/20

TEACHING EXPERIENCE

Advanced Topics 01 - Deep Learning & Neural Networks

SRBIAU, Tehran, Iran

TEACHING ASSISTANT | INSTRUCTOR: FARSAZ ZAMANI BOROUJENI | (SCHOLAR)

Jan. 2023 - Jun. 2023

- Subjects taught: Design and Implementation of Neural Networks | Hands on experience with Tensorflow/Keras | Theory and basics of linear algebra and mathematics in Neural Networks

Digital Systems Design

SRBIAU, Tehran, Iran

TEACHING ASSISTANT | INSTRUCTOR: MAHDI BAGHERIZADEH | (SCHOLAR)

Jan. 2023 - Jun. 2023

- Subjects taught: Theory and basics of FPGA, VLSI, PLD/CPLD | Designing basic circuits with different topologies

Python/Tensorflow Workshop

SRBIAU, Tehran, Iran

TEACHING ASSISTANT | INSTRUCTOR: HAMIDREZA BOLHASANI | (SCHOLAR)

Sept. 2022 - Dec. 2022

- Subjects taught: Theory of Machine Learning/Deep Learning | modeling Neural Networks with SKLearn/Tensorflow

Robotics, Programming & Electronics

Kavosh Creativity House, Tehran, Iran

TEACHER / TEACHING ASSISTANT

May 2019 - Dec. 2021

- Subjects taughts: Programming AVR Microchips with C | AVR Microchip simulation with Proteus Circuit Simulator | Basics of Electronics & Soldering

SKILLS

Programming	Python C/C++ HTML/CSS3 JS LaTeX VBA
Data Science	Tensorflow/Keras PyTorch SKLearn Matplotlib Opencv Pandas
IDEs/Tools	Anaconda VSCode PyCharm VIM Terminal MATLAB Proteus Simulator Adobe PS/AI/PR/AE Altium Designer CodeVision DeepLabCut
Languages	Native Farsi English Basic Arabic

ACADEMIC & RESEARCH PROJECTS

Object Space Tracking | Genzel Lab, Donders Institute for Brain, Cognition And behaviour

RU, Nijmegen, The Netherlands

RESEARCH INTERN | INSTRUCTOR: ABDELRAHMAN RAYAN (RESEARCHGATE) | LISA GENZEL (SCHOLAR)

Summer 2023

- Tracking Rodents with DEEPLABCUT, a software package for animal pose estimation
- Data synchronization with rodents' LFP signals recorded with EEG;

Handwriting Recognition in the medical industry (Prescription Recognition)

SRBIAU, Tehran, Iran

RESEARCH ASSISTANT | INSTRUCTOR: AZADEH ZAMANIFAR (SCHOLAR)

Summer 2022

- Model review; Easter 2.0, Improving Convolutional models for Handwritten text recognition - Kartik Chaudhary
- Implementing a model in PyTorch framework; Easter 2.0

PUBLICATIONS

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|------|---|----------------|
| 2023 | Hosseini Naghavi SS, Moosavi SR, Bolhasani H., An optimized neural network for real-time Endoscopy/Colonoscopy image segmentation. | In preparation |
| 2023 | Zoghi AH, Mosalli A, Hosseini Naghavi SS, Golaghaei A., A deep learning method for land subsidence prediction. | In preparation |

HONORS & AWARDS

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|------|--|-------------------|
| 2023 | Technical Committee, Self-Driving Cars, National Robotics Competition, RoboCup Open | Tehran, Iran |
| 2022 | Technical Committee, Self-Driving Cars, National Robotics Competition, RoboCup Open | Tehran, Iran |
| 2018 | 1st Place, International Robotics Competition, Robocup | Montreal, Canada |
| 2017 | 1st Place, International Robotics Competition, Robocup | Nagoya, Japan |
| 2018 | 1st Place, International Robotics Competition, Robocup Asia-Pacific | Kish Island, Iran |
| 2018 | 1rd Place, National Robotics Competition, Robocup Open | Tehran, Iran |
| 2017 | 1rd Place, National Robotics Competition, Robocup Open | Tehran, Iran |
| 2016 | 1rd Place, National Robotics Competition, AUTCup Amirkabir University | Tehran, Iran |
| 2016 | 1rd Place, World Mathematics Team Championship, Selection Exam | Tehran, Iran |

WORK EXPERIENCE

National Robocup Committee of Iran

Tehran, Iran

TECHNICAL COMMITTEE & MEMBER

Jun. 2017 - Present

- Participated in International Robocup Competitions 2017 Japan and 2018 Canada as Kavosh Team and IRNC member
- Cooperated as Organizing Committee in the Asia-Pacific Robocup 2018, and IranOpen Robocup 2020, 2022, and 2023
- assigned as Technical committee/Referee for the Self-Driving cars League in the IranOpen Robocup 2022, and 2023

Ariaz Balan Servat

Tehran, Iran

IT SPECIALIST & GRAPHIC DESIGNER

Feb. 2021 - May 2021

- Managed office devices and computers and content creation for various social medias, Posters and Flyers

Kavosh Creativity House

Tehran, Iran

SHAREHOLDER, TEACHER & GRAPHIC DESIGNER

May 2019 - Dec. 2021

- Taught C Programming language, Electronics and soldering at various schools/high-schools
- Designed Flyers, Posters, Social media content etc.

Kavosh Robotics Team

Tehran, Iran

TEAM MEMBER & PROGRAMMER

Sept. 2016 - Mar. 2019

- Developed algorithms and software for an autonomous pathfinder rescue robot
- Implemented Various Software/Hardware methods to rescue victims using the robot