

S.M.H. Hosseini

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EDUCATION

University of Tehran

B.Sc. in Electrical and Computer Engineering, GPA: 3.6 (17.16/20)

- Thesis: "Single-view 3D Reconstruction of Surface of Revolution"

Tehran, Iran

2016–2021

EXPERIENCE

Research Assistant at NBML

Implementing a data-driven framework for Fiber Tractography

- Proposing a novel convolutional model to estimate fODF from MRI data
- Introducing an automatic end-to-end tractography pipeline

Tehran, Iran

2021 - 2022

Research Intern at Daha Tech

Developing a wireless indoor positioning system using BLE antennas

- Implementing real time locating system (RTLS) using Kalman filter and clustering algorithms

Tehran, Iran

Summer 2019

PUBLICATIONS

1. S.M.H. Hosseini, M. Hassanpour, S. Masoudnia, S. Iraj, S. Raminfard, M. Nazem-Zadeh, "Transformer-based Framework for Fiber Orientation Estimation & Tractography," *Journal of Magnetic Resonance Imaging*, submitted.
2. S.M.H. Hosseini, S.M. Nasiri, R. Hosseini, H. Moradi, "Single-view 3D Reconstruction of Surface of Revolution," *Pattern Recognition Letters*, to be submitted.

TEACHING

- **Student Teaching Assistant** at University of Tehran Fall 2020
Linear Control System
- **Student Teaching Assistant** at University of Tehran Fall 2019
Engineering Mathematics
- **Student Teaching Assistant** at University of Tehran Fall 2020
Industrial Control

SKILLS

- **Programming:** Python, Matlab, C/C++
- **M. Learning:** TensorFlow, Google Colab
- **Tools/Techs:** LaTeX, Ubuntu
- **Hardware/System Design:** AVR, Proteus, Simulink, Altium Designer

LANGUAGES

- **English:** Proficient - TOEFL iBT score: 108/120
- **Persian:** Native language

PROJECTS

- **ConvTract: A Convolutional-based Framework for Tractography**
Research Assistant (Python, 2021)
- **Single-view 3D Reconstruction of SOR**
Bachelor's Thesis (Matlab, 2021)
- **Voice Gender Classification**
Pattern Recognition (Python, 2020)
- **Route Optimization**
Operational Research (Python, 2019)
- **Text Generator**
Neural Network (Python, 2020)
- **Movie Server**
Advanced Programming (C++, 2019)
- **Super Mario Game**
Advanced Programming (C++, 2019)
- **Survey of Feature Selection Algorithms**
Pattern Recognition (Python, 2020)
- **Decision Tree Classifier**
Intelligent Systems (Python, 2019)
- **YOLOv5 fine-tuning to detect chess pieces**
Neural Network (Python, 2020)

REFERENCES

- **Prof. Reshad Hosseini** Tehran, Iran
Assistant Professor at Electrical and Computer Engineering School, University of Tehran, Director of Computational Audio-Vision Lab
- **Prof. Mohammad-Reza Nazem-Zadeh** Tehran, Iran
Assistant Professor at Tehran University of Medical Science, Member of Advanced Medical Technologies and Equipment Institute
- **Dr. Masoud Hassanpour** Tehran, Iran
Researcher at the Molecular and Cellular Imaging Center, Advanced Medical Technologies and Equipment Institute (AMTEI), Tehran University of Medical Sciences
- **Prof. Manouchehr Moradi** Tehran, Iran
Associate Professor at Electrical and Computer Engineering School, University of Tehran, Director of Advanced Robotics and Intelligent Systems Lab
- **Prof. Fariba Bahrami BoodeLalou** Tehran, Iran
Associate Professor at Electrical and Computer Engineering School, University of Tehran, Director of Human Motor Control and Computational Neuroscience Lab