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LinkedIn: Zhenous Hadi Jafari

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EDUCATION

University of Texas at Arlington, Texas, USA.
PhD Biomedical Engineering | 2025-2030

Semnan University, Semnan, Iran.
M.Sc. Bioelectric Engineering | 2018-2021

Islamic Azad University, Science and Research Branch (IAUSR), Tehran, Iran.
B.Sc. Biomedical Engineering | 2008-2014

RESEARCH EXPERIENC

Teaching Assistant, University of Texas at Arlington | Sep 2025

- Working on fNIRS under the supervision of Dr. Hanli Liu

Research Assistant, City University of New York | Sept 2023 – Aug 2025

- Investigating the effects of transcranial direct current stimulation (tDCS) on motor learning and cortical excitability.
- Automatic synapse segmentation in rat brain confocal (Fluorescence) microscopy images.
- Collaborating with Dr. Parra's lab on neuromodulation techniques (tDCS & TMS).

Master's Thesis Research, Semnan University | 2018 – 2021

- **Thesis**: Brain Tumor Segmentation in MRI images using Deep Learning method and Convolutional Neural Network Model.
- Deep Learning Methods Applied to Emotion Recognition from EEG Signals

HONORS and AWARDS

- Member of biomedical engineering society (BMES)
- Awarded Fellowship, Department of BME, Semnan University (2018 – 2021)
- Member of Iranian Society of Biomedical Engineers (ICBME)
- Undergraduate Research Award, Azad University, (2010)

PUBLICATION

- **Dose-response of tDCS effects on motor learning and cortical excitability: a preregistered study** (https://direct.mit.edu/imag/article/doi/10.1162/imag_a_00431/125729/Dose-response-of-tDCS-effects-on-motor-learning)
- **Robust enhancement of motor sequence learning with 2 mA transcranial electric stimulation** (*Expected publication: Dec 2025*)
- **Poster presentation** (*2024 NYC Neuromodulation Conference*, New York, NY, August 1-3, 2024.) (https://www.parralab.org/publications/NYCN2024GavinZhenous.pdf)

SKILLS AND CERTIFICATIONS

Technical Skills:

- **Programming**: Python, MATLAB, R **Software**: ImageJ, Fiji, SolidWorks
- **Laboratory Equipment**: EEG, tDCS, TMS, Confocal Microscopy

Certification:

- The New York City Clinical and Research **TMS** Course (Aug 2024)
- **HSR** for Biomedical Graduate student (Credential ID: 59693692) (Nov 2023)
- Working with the **IACUC** (Credential ID: 58675546) (Oct 2023)
- Biomedical Signals Recording and Analysis (**EEG, EMG, fNIRS**) (Nov 2022)
- Application of Robotics in BME & Neuroscience (May 2021)
- **Machine Learning** Applications for Biomedical Signal Processing (Feb 2021)
- Neuroscience & Cognitive Science I & II (Sep 2019 & Jun 2020)
- **Deep Learning** for Medical Data Analysis - Google Colab (Aug 2020)
- Virtual/Augmented/Mixed Reality (Oct 2020)
- Basics of Brain Mapping Using Brain Stimulation Techniques (Oct 2020)
- Important Points in **FMRI** Studies (Nov 2020)
- Practical & Theorical course of **FMRI** (Dec 2020)
- Application of **Brain Mapping** methods in Language Studies (Dec 2020)

COURSEWORK

Neural Engineering	**Deep Learning**
Medical Image Processing	**Mathematical Biology**
Physiology for Engineers	**Biomaterial Interaction**
Digital Signal Processing	**Biomedical Instrument**
Pattern Recognition	**Biological Signal Processing**
Control of Neuromuscular systems	**AI in medicine**

RESEARCH INTERESTS

Signal Processing, Neuroscience, Plasticity, Bionic, neuromodulation, Machine Learning, Artificial Intelligence, Neural Imaging, Medical Imaging

LANGUAGES

Persian: Native, **English**: Fluent, **Arabic**: Familiar

Standardized Tests: GRE: 332 (Quant: 170, Verbal: 162, Writing: 4.0), **IELTS**

HOBBIES

Canyoning (/ZhenousHadi), Rock climbing (certified), Mountain climbing, swimming, TRX training, Salsa dancing, Voluntary teaching Mathematics & Physics.

REFERENCES

Will be provided upon request.