Amirmohammad Mohammadi

College Station, Texas ● (979) 436-5736 ● amir.m@tamu.edu ● Scholar ● LinkedIn ● Website

EDUCATION

Texas A&M University, College Station, Texas   May 2027 (anticipated)
Doctor of Philosophy in Computer Engineering, GPA: 3.75

Sharif University of Technology, Tehran, Iran   February 2021
Master of Science in Electrical Engineering

University of Tabriz, Tabriz, Iran   September 2018
Bachelor of Science in Electrical Engineering

JOURNAL PAPERS

1. Sel, K., **Mohammadi, A.**, Pettigrew, R. I., & Jafari, R. (2023). Physics-informed neural networks for modeling physiological time series for cuffless blood pressure estimation. *Nature NPJ Digital Medicine*, 6(1), 110. [link]
2. **Mohammadi, A.**, Fakharzadeh, M., & Baraeinejad, B. (2022). An integrated human stress detection sensor using supervised algorithms. *IEEE Sensors Journal*, 22(8), 8216-8223. [link]

RESEARCH EXPERIENCE

Graduate Research Assistant, Advisor: Prof. Joshua Peeples   January 2024 – Present
Texas A&M University, College Station, Texas
- Developing signal processing and machine learning for audio and time-frequency data.
- Innovating parameter efficient transfer learning methods for foundation transformer models.

Graduate Research Assistant, Advisor: Prof. Roozbeh Jafari   September 2022 – December 2023
Texas A&M University, College Station, Texas
- Developed AI algorithms for physiological time-series signals analysis and prediction.
- Devised physics-informed neural networks for cardiovascular dynamics with reduced ground truth.

Graduate Student, Advisor: Prof. Mohammad Fakharzadeh   July 2019 – February 2021
Sharif University of Technology, Tehran, Iran
- Developed low-power sensor for human mental stress diagnosis using supervised algorithms.
- Designed the schematics and PCB, programmed the microcontroller, conducted the data collection.

PREPRINTS

1. **Mohammadi, A.**, Masabarakiza, I., Barnes, E., Carreiro, D., Van Dine, A., & Peeples, J. Investigation of Time-Frequency Feature Combinations with Histogram Layer Time Delay Neural Networks. [link]
2. **Mohammadi, A.**, Kelhe, T., Carreiro, D., Van Dine, A., & Peeples, J. Transfer Learning for Passive Sonar Classification using Pre-trained Audio and ImageNet Models. [link]

POSTER PRESENTATIONS

1. **Mohammadi, A.**, Masabarakiza, I., Barnes, E., Carreiro, D., Van Dine, A., & Peeples, J. (2024, April). Investigation of Time-Frequency Feature Combinations with Histogram Layer Time Delay Neural Networks. Poster session presented at the *Electrical & Computer Engineering Graduate Spring Poster Event*, College Station, TX.
2. **Mohammadi, A.**, Sel, K., Pettigrew, R. I., & Jafari, R. (2023, October). Physics-Informed Neural Networks for Modeling Cardiovascular Dynamics. Poster session presented at the *2023 AI in Health Conference*, Houston, TX.

PROFESSIONAL SERVICE

2024 IEEE International Conference on Acoustics, Speech, and Signal Processing   Fall 2023
Helper/Area Chair - Applied Signal Processing Systems
- Invited, assigned, and managed the peer-review process.

2023 IEEE International Conference on Acoustics, Speech, and Signal Processing   Spring 2023
Reviewer
- Conducted reviews of three submitted papers.

TEACHING EXPERIENCE

Sharif University of Technology, Tehran, Iran   Fall 2019
- Graded the assignments of Principles of Electronics course and resolved the disputes

COMPUTATIONAL SKILLS

Python ● PyTorch (Lightning) ● Signal Processing ● Machine Learning ● Deep Learning ● Data Mining

LANGUAGES

English (proficient) ● Azeri (native) ● Farsi (native/bilingual)