Amirmohammad Mohammadi (U.S. Permanent Resident)
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TECHNICAL SKILLS

- **Expertise:** Data Analysis, Machine Learning, Deep Learning, Computer Vision, Multimodal Learning.
- **Tools:** Python, PyTorch, scikit-learn, NumPy, pandas, XGBoost, Hugging Face Transformers, Git.

EDUCATION

Texas A&M University, College Station, Texas — September 2022 – December 2026
Doctor of Philosophy in Computer Engineering

EXPERIENCE

Texas A&M University, College Station, Texas — September 2022 – December 2026
Graduate Research Assistant

- **Developed** a novel distribution-guided parameter-efficient fine-tuning method for audio Transformer foundation models, improving predictive performance while reducing computational costs.
- **Adapted** a computational pathology framework to investigate parameter-efficient fine-tuning of vision-language models for few-shot prediction of ethanol drinking status from whole-slide liver images.
- **Conducted** machine learning research in digital health and Earth observation through research assistantships supported by the NIH and MIT Lincoln Lab, resulting in 7 peer-reviewed publications.

SELECTED PUBLICATIONS

- **A. Mohammadi,** R. Khadka, K. A. Grant, M. L. Benton, and J. Peeples, "Predicting Ethanol Drinking Status from Nonhuman Primate Liver Histology: A Proof of Concept for Parameter-efficient Fine-tuning in Few-Shot Vision-Language Modeling," *IEEE International Conference on Bioinformatics and Biomedicine,* 2026. [link].
- **A. Mohammadi**, D. Carreiro, A. Van Dine, and J. Peeples, "Histogram-based Parameter-efficient Tuning for Passive and Active Sonar Classification," *IGARSS 2026 - 2026 IEEE International Geoscience and Remote Sensing Symposium*, Washington DC, DC, USA, 2026, pp. 5031-5035. [link].
- F. Orvati Nia, **A. Mohammadi**, S. Al Kharsa, P. Naikare, Z. Hampel-Arias, and J. Peeples, "Neighborhood Feature Pooling for Remote Sensing Image Classification," in *Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision (WACV) Workshops*, 2026, pp. 1393–1402. [link]
- **A. Mohammadi**, T. Kelhe, D. Carreiro, A. Van Dine, and J. Peeples, "Cross-Domain Knowledge Transfer for Underwater Acoustic Classification Using Pre-trained Models," in *OCEANS 2025 Brest*, BREST, France, 2025, pp. 1-6. [link]
- K. Sel, **A. Mohammadi**, R. I. Pettigrew, and R. Jafari, "Physics-informed neural networks for modeling physiological time series for cuffless blood pressure estimation," *npj Digital Medicine*, vol. 6, no. 1, p. 110, 2023. [link]
- **A. Mohammadi**, M. Fakharzadeh, and B. Baraeinejad, "An Integrated Human Stress Detection Sensor Using Supervised Algorithms," in *IEEE Sensors Journal*, vol. 22, no. 8, pp. 8216-8223, 2022. [link]