

# Amir Mohammadi

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## EXPERIENCE

Texas A&M University, College Station, Texas

September 2022 – Present

### *Ph.D. Research Assistant*

- **Proposed** a neighborhood feature pooling layer that improved remote sensing image classification accuracy by up to **2.5 percentage points** over standard pooling with near-zero added overhead.
- **Reduced** Transformer-based foundation models fine-tuning parameters (**>10%**) compared to conventional adapters by developing a distribution-aware adaptation algorithm.
- **Raised** classification accuracy of a convolutional-based deep learning model **7 percentage points** by constructing a time-frequency feature engineering for audio applications.
- **Established** a cross-domain transfer learning benchmark showing that ImageNet-pretrained models outperform audio-pretrained models by **3 percentage points** in acoustic classification.
- **Cut** required ground truth by a factor of **15** in physiological time-series signals by using physics-informed neural networks & domain knowledge integration for cuffless blood pressure measurement.
- **Led** research efforts spanning audio, image, and physiological sensing, resulting in **6** publications.

## EDUCATION

Texas A&M University, College Station, Texas

December 2026 (anticipated)

Doctor of Philosophy in Computer Engineering

## SKILLS

- **Tools:** Python; PyTorch; scikit-learn; NumPy; Pandas; Matplotlib; MATLAB; C; Hugging Face; Git; Linux; VS Code; Jupyter Notebook; High-performance Computing.
- **Interests:** Applied AI (health); Foundation Models; Deep Learning Architectures & Techniques; Generative AI; Physics-Informed Machine Learning; Multi-Modal Learning; AI Hardware; Efficient AI.

## AWARDS

- **Received** fully-funded Ph.D. position through Massachusetts Institute of Technology Lincoln laboratory.
- **Received** fully-funded Ph.D. position through National Institute of Health.
- **Received** funded tuition through National University Entrance Exam for B.Sc. & M.Sc. studies.