MASIH ESKANDAR

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SUMMARY

I am a PhD candidate in Computer Engineering specializing in Machine Learning, with expertise in developing innovative AI methods for real-world challenges. My research focuses on creating algorithms that efficiently learn from sequential data, reducing retraining costs, and advancing the robustness and safety of AI for safety-critical applications. With hands-on experience in applications to medical diagnostics and other applied domains, I bridge the gap between theoretical research and practical implementation. My diverse skill set and commitment to impactful AI solutions position me to drive advancements in AI research and development.

EDUCATION

9/2022 - Now **Ph.D. - Electrical and Computer Engineering** **Curr. GPA 3.86/4**
Northeastern University, Boston, Massachusetts
Advisor: Jennifer Dy
Courses: Big Data Sparsity and Control - Advanced Computer Vision - Advanced Deep Learning - Verifiable Machine Learning - Advanced Machine Learning - Statistical Inference

9/2018 - 6/2022 **B.Sc. - Computer Engineering** **GPA 3.96/4**
Sharif University of Technology, Tehran, Iran
Courses: Linear Algebra - Probability and Statistics - Advanced Information Retrieval - Natural Language Processing (NLP)

PUBLICATIONS

2025 **STAR: Stability-Inducing Weight Perturbation for Continual Learning** **ICLR**
M. Eskandar, T. Imtiaz, D. Hill, Z. Wang, J. Dy

2025 **ADAPT to Robustify Prompt Tuning Vision Transformers** **TMLR**
M. Eskandar, T. Imtiaz, Z. Wang, J. Dy

2023 **ZeroGrad: Costless conscious remedies for catastrophic overfitting in the FGSM adversarial training**
Intelligent Systems with Applications
Z. Golgooni, M. Saberi*, **M. Eskandar***, M.H. Rohban

RESEARCH EXPERIENCE

9/2022 - Now **Research Assistant at Northeastern University** **Prof. Jennifer Dy**
- Continual Learning - Adversarial Robustness
  - Robustness of Parameter Efficient Fine-Tuning for Foundation Models
  - Enhancement of Rehearsal-Based Continual Learning
- Machine Learning for Skin Cancer Melanoma Diagnosis
  - Computer Assistance in Melanoma Registration and Diagnosis
  - Diagnosis Prediction Using Low-Quality Images
  - Synthetic Data using Generative AI/Diffusion Models

6/2021 - 11/2021 **Research Intern at Technical University of Munich** **Prof. Nassir Navvab**
- Explainablity of Deep Learning
  - Effect of Input Distribution Shift in Information Bottleneck Attribution
  - Global Class Attributions

6/2020 - 6/2022 **Research Assistant at Sharif University of Technology** **Prof. Mohammad Hossein Rohban**
- Adversarial Robustness
  - Efficient Single-step Adversarial Training

SKILLS

Programming Languages Python / C++ / C / Java / R

Tools and Frameworks Pytorch / Tensorflow / Numpy / OpenCV / Pandas / JAX / AutoLiRPA

AWARDS AND ACHIEVEMENTS

2020 **Rank 30th Nationwide** **Among ~150000 participants**
University Entrance Exam Math and Physics Branch (Konkur)