Seyed Mohammad Pishbin

Ph.D. Student in Computer Science

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Professional Summary

Ph.D. student in Computer Science at the University at Albany (SUNY) with research and engineering experience in **graph machine learning**, **adversarial robustness**, and **reproducible AI benchmarking**. Currently studying robustness in graph neural networks through continuous graphon representations and building a fair benchmark comparing quantum and classical graph kernels for graph classification. Strong foundation in **Python**, **PyTorch**, machine learning experimentation, and technical problem solving. Seeking software engineering, AI engineering, or research-oriented internship opportunities.

Education

2024 – Present   **Ph.D. in Computer Science**, *University at Albany, State University of New York*, Albany, NY
Research focus: graph machine learning, adversarial robustness, graph neural networks, transfer learning, and reproducible ML systems.

Research Experience

2024 – Present   **Ph.D. Researcher**, *University at Albany, State University of New York*, Albany, NY
- Conduct research in **graph machine learning** with a focus on adversarial robustness, continuous graph representations, and robust learning on graph-structured data.
- Develop methods for **Adversarial Robustness for Graph Neural Networks via Continuous Graphon Representations**, exploring graphon-based formulations for more stable and transferable defenses.
- Build a reproducible benchmark comparing **quantum kernels** and **classical graph kernels** under fair evaluation protocols for graph classification.
- Prepare a review article synthesizing graph adversarial attacks, defenses, and continuous graph-based robustness perspectives.
- Work across theory, experimentation, implementation, comparative evaluation, and research documentation in LaTeX.

Teaching Experience

2024 – Present   **Teaching Assistant**, *University at Albany, State University of New York*, Albany, NY
- Support undergraduate and graduate instruction in computer science courses spanning programming, algorithms, and data-oriented computing.
- Mentor and assist **100+ students** through office hours, assignment support, debugging guidance, and concept clarification.
- Provide detailed, rubric-based feedback to improve code quality, correctness, and problem-solving approach.
- Help bridge theory and implementation through support in Java, Python, algorithmic thinking, and practical coding workflows.

Selected Research Projects

Adversarial Robustness for Graph Neural Networks via Continuous Graphon Representations

Investigating graphon-based continuous representations as a framework for improving robustness in graph neural networks, connecting discrete adversarial perturbations with continuous defenses.

Quantum Kernels Meet Graph Kernels: A Fair, Reproducible, and Resource-Aware Comparative Benchmark for Graph Classification

Designing a benchmark to compare quantum kernels and classical graph kernels for graph classification under a shared, fair, and reproducible experimental protocol.

From Discrete Perturbations to Continuous Defenses: Graphon-Based Robustness for Graph Neural Networks

Preparing a review article on adversarial robustness in graph learning, focusing on the progression from discrete attack and defense mechanisms to continuous graphon-based viewpoints.

Technical Skills

Languages	Python, C++, SQL, Java
ML / AI	PyTorch, TensorFlow, Scikit-learn, model evaluation, machine learning experimentation, reproducible benchmarking
Graph ML	Graph neural networks, adversarial graph learning, graph kernels, transfer learning, domain adaptation, graph classification
Tools	Git, LaTeX, Jupyter, VS Code
Strengths	Research implementation, technical writing, literature synthesis, experimental design, debugging, data analysis

Certifications

Selected	AWS, Meta, Microsoft, and IBM certificates in AI, machine learning, data analytics, SQL, Python, and deep learning.