

# Mohammadreza Teymoorianfard

Manning College of Information and Computer Sciences, University of Massachusetts, Amherst, MA, USA

☎ +1 413-313-9653 | ✉ mteymoorianf@umass.edu | 🏠 mrteymoorian.github.io | 📷 mrteymoorian | 🌐 teymoorian

## Education

### University of Massachusetts Amherst

MSc/PHD IN COMPUTER SCIENCE

- GPA: 3.9/4

Massachusetts, USA

Sep 2023 - present

### University of Tehran

BSc IN ELECTRICAL ENGINEERING

- GPA: 19.06/20 (4/4)
- Ranked 3<sup>rd</sup> among 120 Electrical Engineering students

Tehran, Iran

Sep 2018 - Jun 2023

### University of Tehran

MINOR IN COMPUTER ENGINEERING

- GPA: 17.05/20

Tehran, Iran

Sep 2019 - Jun 2023

## Research Interests

- Trustworthy Machine Learning
- Privacy and Security in Generative AI Models
- Watermarking for Multi-modal Systems
- Adversarial Robustness in Neural Networks

## Publications

**Teymoorianfard, M.**, Ma, S. and Houmansadr, A., 2025. *VIDSTAMP: A Temporally-Aware Watermark for Ownership and Integrity in Video Diffusion Models*. arXiv preprint arXiv:2505.01406.

Amini, S., **Teymoorianfard, M.**, Ma, S. and Houmansadr, A., 2024. *MeanSparse: Post-Training Robustness Enhancement Through Mean-Centered Feature Sparsification*. arXiv preprint arXiv:2406.05927.

## Research Experience

### Umass Amherst - The Secure, Private Internet (SPIN) Research Group

Amherst, MA

ADVISORS: AMIR HOUMANSADR, SHIQING MA

Sep. 2023 - Present

- Focused on developing watermarking and model attribution techniques for multi-modal systems, contributing to advancements in model security and traceability.
- Enhanced neural network robustness by reducing feature variation, setting new AutoAttack accuracy records on CIFAR-10, CIFAR-100, and ImageNet.

### University of Tehran - Smart Networks Lab

Tehran, Iran

ADVISOR: HAMED KEBRAEI

Jun. 2022 - Jun. 2023

- Implemented a Model Predictive Control (MPC) for autonomous taxi navigation.

### University of Tehran

Tehran, Iran

ADVISOR: RESHAD HOSSEINI

Jun. 2021 - Sep. 2021

- Developed a text detection system for card images, enhancing accuracy in document recognition.

## Skills

### Programming Languages

Python, C/C++, MATLAB, Verilog

### Python Libraries & Frameworks

PyTorch, TensorFlow, Transformers, OpenCV, scikit-learn, NumPy, Pandas, Matplotlib, RL-Glue, PuLP, MIP

## Honors & Awards

---

- 2023 Recipient of an industry-sponsored award for outstanding bachelor's thesis work
- 2020 Awarded the University of Tehran Sponsors Foundation Honorable Award for Academic Excellence
- 2020 Recipient of the Faculty of Engineering (FOE) Award for achieving 2nd rank in the 2019-2020 academic year
- 2018 Ranked in the top 0.4% of over 150,000 students in the Iranian National University Entrance Exam
- 2011 Admitted to National Organization for Exceptional Talents (NODET) for middle and high school

## Teaching Experience

---

|             |  |                      |
|-------------|--|----------------------|
| Fall 2024   | CICS 160: Object-Oriented Programming, TA  | Umass Amherst        |
| Summer 2024 | COMPSCI 589: Machine Learning, TA          | Umass Amherst        |
| Spring 2024 | COMPSCI 119: Intro to Programming, TA      | Umass Amherst        |
| Fall 2022   | Intelligent Systems, TA                    | University of Tehran |
| Spring 2022 | Mechatronics, TA                           | University of Tehran |
| Spring 2022 | Signal and Systems TA                      | University of Tehran |
| Fall 2021   | Engineering Probability and Statistics, TA | University of Tehran |
| Spring 2021 | Electronics1, Head TA                      | University of Tehran |

## Relevant Courses

---

### University of Massachusetts Amherst

- COMPSCI603: Robotics
- COMPSCI611: Advanced Algorithms
- COMPSCI685: Adv Natural Language Processing
- COMPSCI682: Neural Networks, Modern Intro
- COMPSCI660: Advanced Information Assurance

### Coursera

- Motion Planning for Self-Driving Cars
- Introduction to Self-Driving Cars
- A Complete Reinforcement Learning System
- Fundamentals of Reinforcement Learning

### University of Tehran

- Deep Learning
- Reinforcement Learning
- Machine Learning
- Artificial Intelligence
- Mechatronics
- Linear Algebra
- Engineering Probability and Statistics
- Operational Research
- Modern Control Systems

## Language

---

- ◇ ENGLISH: Advanced Proficiency
- ◇ PERSIAN: Native