

Prinkle Sharma

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EDUCATION

University of Massachusetts Dartmouth

College of Engineering - ABET accredited

Doctor of Philosophy – Computer Engineering. GPA: 4.0/4.0

North Dartmouth, MA

Spring 2020

University of Massachusetts Dartmouth

College of Engineering - ABET accredited

Master of Science - Computer and Information Science. GPA: 3.81/4.0

North Dartmouth, MA

August 2016

HONORS & AWARDS

- Article published in IEEE innovation spotlight magazine demonstrating research in artificial intelligence (January 2018 issue: <https://innovate.ieee.org/innovation-spotlight/self-driving-vehicles/>)
- Distinguish Doctoral Fellowship 2016-2017
- Resident Assistant of the Year 2016-2017
- Rising Star of the Year 2016-2017
- Graduate Student Senate Travel Fund 2018: IEEE-VTC Chicago, USA
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- Graduate Student Senate Travel Fund 2019: Nvidia GTC Washington, USA

RESEARCH & PUBLICATIONS

- So, Steven B, Prinkle Sharma, and Jonathan Petit. "Integrating Plausibility Checks and Machine Learning for Misbehavior in VANET" accepted to Machine Learning and Applications (ICMLA), 2018 17th International Conference on. IEEE, 2018.
- Sharma, Prinkle, et al. "Securing wireless communications of connected vehicles with artificial intelligence." *Technologies for Homeland Security (HST)*, 2017 IEEE International Symposium on. IEEE, 2017.
- Sharma, Prinkle, et al. "Ethics in Self-Driving Vehicles with Machine Learning." Rhode Island, University of, 2016.
- Sharma, Prinkle, et al. "Pearson Correlation Analysis for Misbehavior Detection in VANET." *2018 IEEE 88th Vehicular Technology Conference (VTC Fall)*. IEEE, 2018.
- Sharma, Prinkle, et al. "Attacks on Machine Learning: Adversarial Examples in Connected and Autonomous Vehicles." *Technologies for Homeland Security (HST)*, 2019 IEEE International Symposium on. IEEE, 2019.
- Sharma, Prinkle, et al. "Towards an AI-Based After-Collision Forensic Analysis Protocol for Autonomous Vehicles." 2020 IEEE Workshop on Assured Autonomous Systems (WAAS) at 41st IEEE Symposium on Security and Privacy. IEEE, 2020
- Sharma, Prinkle, et al, "A Machine Learning-Based Data-Centric Misbehavior Detection Model for Internet of Vehicles." 2020 IEEE Internet of Things journal (in revision. 2020)

WORK EXPERIENCE

Student Advisor

- Mentored 4 master students research, 3 master thesis and 1 master project, on security and privacy of connected vehicles at University of Massachusetts, Dartmouth

Prinkle Sharma

- Presented 4 guest lecture: 3 at University of Massachusetts, Dartmouth and 1 at The University of Rhode Island on machine learning

Teaching Assistant, University of Massachusetts Dartmouth

ECE 202: Circuit Theory II (Spring 2019)

ECE 263 Embedded System Design (Fall 2017, Spring 2018, Spring 2019)

ECE-369 Computer Networks (Spring 2017, Spring 2018)

ECE-565 Operating System (Fall 2017)

ECE-548 Cyber Threads (Fall 2017)

ECE-161 Fundamentals of C (Spring 2017)

- Assisted professors with administrative tasks and curriculum development for 30-35 undergraduate students
- Prepared course material including laboratory projects, exams, homework, and class projects related to network and cybersecurity, embedded systems, and C programming
- Conducted weekly labs and proctored exams
- Supervised individual projects and graded homework and weekly lab reports

Teaching Instructor, University of Massachusetts Dartmouth

EGR-101 Introduction to Engineering and Computing (Fall 2018, Fall 2019)

Internship

May 2019 – August 2019

Amadues North America Inc. – Waltham, MA

Summer Intern

- Designed a Machine Learning based Trip Expense Predictor tool to forecast employee's travel expenses
- Integrated data from several data sources including real time API's, databases
- Built the framework, deployed the machine learning model and output the relevant information
- Deployed Machine Learning framework into an API using python Flask

May 2018 – August 2018

OnBoard Security – Wilmington, MA

Summer Intern

- Designed and developed a machine learning based framework to detect the misbehavior in the vehicle to vehicle communication
- Identified the limitations of the machine learning for misbehavior detection and provided the baseline for deep learning
- Accepted paper based on machine learning in IEEE ICMLA conference

CONFERENCE PROGRAM/REVIEWER COMMITTEE

- Served on Reviewer committee for IEEE- Intelligent Transportation System 2018
- Served on Reviewer committee for IEEE- Communication Letter 2019
- Served on Reviewer committee for IEEE- International Symposium on Technologies for Homeland Security 2019

Prinkle Sharma

- Serving on program committee for VEHICULAR 2020, The Ninth International Conference on Advances in Vehicular Systems, Technologies and Applications

LICENSES and CERTIFICATIONS

- NVIDIA DLI CERTIFICATION - DLI Platform Course for Instructors
- NVIDIA DLI CERTIFICATION - Fundamentals of Deep Learning for Computer Vision
- NVIDIA DLI CERTIFICATION - Fundamentals of Deep Learning for Multiple Data Types

CLUBS & INTERESTS

- **UNICEF NextGen:** Member (Fall 2018-present)
- **Cyber Security Education Club (UMass Dartmouth):** President (2017-present)
- **Graduate Student Senate (UMass Dartmouth):** Treasure (2016-2017)
- **Society of Women Engineers (UMass Dartmouth):** Vice-President (2015-2016)
- **Indian Student Association (UMass Dartmouth):** Cultural Secretary (2015-2016)