

Clifton Paul Robinson

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WORK EXPERIENCE

Northeastern University

Graduate Research Assistant

Boston, MA

Jan. 2021 - Present

Institute for the Wireless Internet of Things

- Conducted and published technical research in the areas of wireless network security, deep learning-based spectrum sensing, and communication security.
- Worked on foundational research in utilizing digital twins concerning the wireless spectrum, specifically for spectrum sensing and resource management.

Instructor of Record

Jan. 2023 - May 2023

Khoury College of Computer Science

- Instructor for the course CY 2550 - Foundations of Cybersecurity.
- Designed engaging lesson plans incorporating real-world case studies.
- Integrated current cyber trends and practices into the course material for relevance.

Cybersecurity Research Consultant

Aug. 2019 - June 2020

Global Resilience Institute, Critical Infrastructure Network (CINet) funded by DoE

- Focused on uni-directional communication systems and offered technical guidance.

The MITRE Corporation

Bedford, MA

Signal Analysis Graduate Intern

May 2023 - Aug. 2023

Comms SIGINT & PNT team

- Specialized in Research and Development (R&D) and Signal Processing.
 - Focus on RF Fingerprinting and large-scale spectrum infrastructure deployment.
 - Managed dual projects, engaging in individual and team research discussions effectively.
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RESEARCH/PUBLICATIONS

DeepSweep: Parallel and Scalable Spectrum Sensing via Convolutional Neural Networks

May 2024

- Introduces *DeepSweep*, a more scalable and fast approach (98% accuracy, <1 ms latency) to AI-based spectrum sensing that seamlessly integrates with existing designs.

IEEE ICMLCN '24

Narrowband Interference Detection via Deep Learning

June 2023

- Developed a high-accuracy approach for detecting and locating narrowband interference, achieving up to 99% accuracy with a low latency of 0.093ms on a real wireless testbed.

IEEE ICC '23

eSWORD: Implementation of Wireless Jamming Attacks in a Real-World Emulated Network

March 2023

- We proposed *eSWORD*, the first large-scale framework that allows users to conduct real-time and controlled jamming experiments with hardware-in-the-loop safely.
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IEEE WCNC '23

EDUCATION

Northeastern University

Boston, MA

Ph.D. in Cybersecurity

Sep. 2018 - Present

Ph.D. Advisor: Prof. Tommaso Melodia

GPA: 3.783

Researched AI-based spectrum sensing, wireless security, and wireless spectrum digital twins.

Completed Academic Tracks: Network Security, Cybersecurity Policy

M.S. in Cybersecurity awarded in May 2020

2018 KCCIS Graduate Fellowship

Bridgewater State University

Bridgewater, MA

B.S. magna cum laude in Computer Science and Mathematics, with Honors

Sep. 2014 - May 2018

Coursework and research in cybersecurity and mathematical cryptography.

GPA: 3.723

TECHNICAL SKILLS & KNOWLEDGE

Technologies: Programming (Python (*TensorFlow*), Java, C++ (*Fair*), Bash - security, networking, & scripting), Markup (LaTeX, HTML), Software (PyCharm, Eclipse, Microsoft Office, Photoshop).

Professional Skills: Oral & written communications, teamwork, leadership, public speaking, academic writing, quantitative and qualitative research, cyber & resilience policy (through coursework).

Familiarity with Regulations/Frameworks: US Export Controls, GDPR, U.S. Privacy & Data Laws