


MAHER AL ISLAM

Graduate Assistant, West Virginia University, WV, USA

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KEY QUALIFICATIONS

- 2+ years of experience working in System modeling
- 3+ years in building an CPS testbed ([OpenCyberCity](#))
- 3+ years in cyber attack detection & mitigation
- 2+ years experience in ML and RL, focusing on time-series data forecasting, classification, and perception layers
- 6+ month experience in Robotics Robot Operating System (ROS) ([iCPS Lab](#))

TECHNICAL AND SOFTWARE SKILLS

- **System Modeling using MDP (Simulink):** Smart Water Distribution, Smart Home Residential Building
- **Machine Learning-based prediction and Classification (Python):** Temperature Prediction, Water-Demand prediction, Autonomous Vehicle Basic Safety Message (BSM) anomaly detection
- **Reinforcement Learning (Python & MATLAB):** RL-based Smart Home Autonomous IRS
- **Computer Network/IoT Setup:** TCP and UDP client-server implementation in C, DNS Setup, Firewall Rule setup using NetFilter, Raspberry Pi MQTT setup using Node.js
- **Computer Network Attack Implementation:** Packet Sniffing and Spoofing using Scapy, TCP Reset & Port Scan Attack using Nmap, Man in the Middle (MiTM), DNS Attack, ARP Spoofing, DoS Attack, Mitnick Attack
- **Packet analysis** using WireShark
- **AV Robotics** using Robot Operating System (ROS)
- **Game Theory** in DDoS Mitigation Strategy using MATLAB

EDUCATION

West Virginia University (Advisor: Dr. Amr El-Wakeel)

Ph.D. in Computer Engineering

August, 2024 – Ongoing

Morgantown, WV, USA

Virginia Commonwealth University (Advisor: Dr. Sherif Abdelwahed)

M.S. in Electrical & Computer Engineering GPA: 4.0/4.0

January, 2021 – May, 2024

Richmond, VA, USA

University of Dhaka

B.Sc. in Electrical & Electronic Engineering GPA: 3.41/4.0

Jan, 2012 – October, 2016

Dhaka, Bangladesh

PEER-REVIEWED PUBLICATIONS [GOOGLE SCHOLAR LINK](#)

- M. Zaman, M. Al Islam, N. Zohrabi and S. Abdelwahed, "A Machine Learning-Based Temperature Control and Security Protection for Smart Buildings", 2024 IEEE International Conference on Smart Computing (SMARTCOMP), 2024
- M. Al Islam et al., "A Game-Theoretic Model for DDoS Mitigation Strategies with Cloud Services", IEEE NOMS Symposium, 2022

- M Zaman, M. Al Islam et al., "An Uncertainty Based Predictive Analysis of Smart Water Distribution System Using Bayesian LSTM Approach", 6th International Conference on Universal Village (UV), 2022
- N Zohrab,..., M. Al Islam et al., **Opencity: An open architecture testbed for smart cities**, IEEE International Smart Cities Conference (ISC2), 2021
- M Zaman, M. Al Islam et al., "Adaptive Control for Smart Water Distribution Systems", IEEE International Smart Cities Conference (ISC2), 2021

POSTERS AND PRESENTATIONS

- M. Al Islam et al., **OpenCyberCity Testbed's Recent Progress in Smart City Management (best poster award)**, SmartComp 2024, June 2024
- M. Al Islam et al., **Towards Sustainable Urban Futures: Advancing Urban Tech with the OpenCyberCity Testbed**, CCI Symposium 2024, April 2024

PROFESSIONAL COLLABORATION

Developing Autonomic Security Management System for Smart Cities	January, 2023 - Present
<i>Virginia Commonwealth University ECE & CS</i>	<i>Richmond, VA, USA</i>

Adversarial Attack Detection in Connected Autonomous Vehicles	January, 2022 - August, 2022
<i>Virginia Commonwealth University & University of Virginia</i>	<i>Richmond, VA, USA</i>

LEADERSHIP AND SPECIAL SKILLS

- **President**, Bengali Cultural Association of Graduate Students (**BCAGS**), VCU, Spring 23-Fall 23
- **Event Co-ordinator**, Engineering Graduate Student Association (**EGSA**), VCU, Fall 21-Spring 22
- Mentoring undergraduates in lab experiments (EGRE 364, EGRE 337, EGRE 245, EGRE 354, EGRE 454)
- **RAMily Captain**, VCU, Fall 23)
- Guitarist [InSlate](#)

AWARDS & CERTIFICATION

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| • IEEE ComSoc Student Travel Grant - NOMS 2022 | • Fundamentals of Computer Network Security (Hacking) (Crypto) (Firewall & IDS) |
| • Stateflow Onramp (MathWorks) | • Linux for Absolute Beginners (Udemy) |

FEATURED MEDIA

- [New testbeds at VCU](#)
- [Smart City Testbed](#)