

MAHER AL ISLAM

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RESEARCH INTEREST

- Autonomous Vehicles
- Cybersecurity
- AI Safety & Ethics
- Adversarial AI
- Cyber-Physical System

TECHNICAL SKILLS

- **Artificial Intelligence:** Adversarial AI (FGSM, PGD, UAP, DeepFool); Vision AI (YOLO, UNet, ViT); Context-Aware AI; Reinforcement Learning (Q-Learning, DQN, MDP); Multimodal Sensor Fusion (Camera, LiDAR)
- **Autonomous Systems:** ROS, CARLA, Duckietown; Perception–Control Integration; Control Methods (PID, RL, MPC); CPS Modeling (Smart Homes, Smart Water Distribution)
- **Cybersecurity:** CPS/IoT Security; Game-Theory; Intrusion Detection & Response; Adversarial BSM Detection in CAVs; CTF (Crypto, Cracking, Network, Scanning, Forensics)

EDUCATION

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

Ph.D. in Computer Engineering

August, 2024 – Ongoing

WV, USA

Virginia Commonwealth University (Advisor: Dr. Sherif Abdelwahed)

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

January, 2021 – May, 2024

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](#)

[J1] Islam, Maher Al; Srivastava, Anurag K.; El-Wakeel, Amr S., "AI in Autonomous Vehicles Under Siege: Vulnerabilities, Challenges, and Path Forward." Manuscript received in IEEE Transactions on Intelligent Vehicles. (In Review)

[C1] M. Al Islam, El-Wakeel, "Towards Context-Aware Autonomous Driving in Degraded Urban Environments using LaneNet." Submitted to IEEE International Conference on Robotics and Automation (ICRA), September 2025. (Submitted)

[C2] M. Al Islam, El-Wakeel, "Integrating Perception and Control for Resilient Autonomous Driving under Vision Adversarial Attacks." In preparation for IEEE Intelligent Vehicles Symposium, November 2025. (In Progress)

[C3] 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), Osaka, Japan, 2024

[C4] M. Zaman, M. A. Islam, A. Tantawy and S. Abdelwahed, "An Uncertainty Based Predictive Analysis of Smart Water Distribution System Using Bayesian LSTM Approach", 2022 6th International Conference on Universal Village (UV), Boston, MA, USA, 2022

[C5] M. Al Islam, C. J. Fung, A. Tantawy and S. Abdelwahed, "A Game-Theoretic Model for DDoS Mitigation Strategies with Cloud Services", NOMS 2022-2022 IEEE/IFIP Network Operations and Management Symposium, Budapest, Hungary, 2022

[C6] Zohrabi, N., Martin, P.J., Kuzlu, M., Linkous, L., Eini, R., Morrissett, A., Zaman, M., Tantawy, A., Gueler, O., Al Islam, M. and Puryear, N., 2021, September. **Opencity: An open architecture testbed for smart cities**. 2021 IEEE International Smart Cities Conference (ISC2)

[C7] M. Zaman, M. Al Islam, A. Tantawy, C. J. Fung and S. Abdelwahed, "Adaptive Control for Smart Water Distribution Systems", 2021 IEEE International Smart Cities Conference (ISC2), Manchester, UK, 2021

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>

SOFTWARE & TOOLS

 **Programming:** Python, C, MATLAB/Simulink, ROS, Bash/Linux

 **Frameworks:** PyTorch, TensorFlow, OpenCV, Scikit-learn, Docker, Git

 **IoT:** NVIDIA Jetson (AGX), Raspberry Pi, ZED Stereo Camera; MQTT, TCP/UDP

 **CTF:** Scapy, Wireshark, Aircrack-ng, John/Hashcat, Metasploit, Burp, Netcat, Volatility

AWARDS & CERTIFICATIONS

- **Diamond Badge** (97th Percentile) – [NCL CTF 2025](#)
- **3rd Place** – [WVU AI Symposium 2025](#)
- **Best Poster Award** – [IEEE SmartComp \(2024\)](#)

LEADERSHIP & SPECIAL SKILLS

- **President**, WVU Bengali Students' Association (BSA), Aug 2024 – Present
- **Founding President**, Bengali Cultural Association of Graduate Students (BCAGS), VCU, Spring 2023 – Fall 2023
- **Event Coordinator**, Engineering Graduate Student Association (EGSA), VCU, Fall 2021 – Spring 2022

REFERENCES

Available upon request.