


# 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

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

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


## SOFTWARE & TOOLS

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 **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

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

## LEADERSHIP & SPECIAL SKILLS

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- **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

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Available upon request.