

# Md Asifur Rahman

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## Education

- Jan/2022 **Master of Science in Computer Science,**  
to Wake Forest University, North Carolina, USA,  
Dec/2023 **Dissertation title:** *An adaptive background modeling based on modified running Gaussian average method* .  
(Expected)  
Feb/2012 **Bachelor of Science in Computer Science & Engineering,**  
to Rajshahi University of Engineering & Technology (RUET), Bangladesh,  
Oct/2016 **CGPA:** 3.74 out of 4.00 (Position: 4th out of 56)  
**Dissertation title:** *An adaptive background modeling based on modified running Gaussian average method* .

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## Professional Experience

- Jan/2022 **Graduate Research Assistant,**  
to Wake Forest University, North Carolina, USA,  
Present **Supervisor:** Dr. Sarra Alqahtani.  
May/2022 **Test Engineering Intern,**  
to Qorvo, Greensboro, USA .  
Aug/2022  
May/2021 **Assistant Professor (Currently on study leave),**  
to Department of Computer Science,  
(Presently on Rajshahi University of Engineering & Technology (RUET),  
Study Leave) Rajshahi, Bangladesh.  
July/2017 **Lecturer,**  
to Department of Computer Science,  
May/2021 Rajshahi University of Engineering & Technology (RUET),  
Rajshahi, Bangladesh.  
Jan/2017 **Lecturer,**  
to Department of Software Engineering,  
April/2021 Daffodil International University (DIU),  
Dhaka, Bangladesh.

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## Research Interest

Safe Reinforcement Learning, explainable Safe Reinforcement Learning (XRL), explainable AI (XAI),  
ML Stability & Fairness

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## Publications

- 2023 **Md Asifur Rahman**, Sarra Alqahtani "Adversarial Behavioral Exclusion for Safe Reinforcement Learning", *32nd International Joint Conference on Artificial Intelligence (IJCAI 2023)*.  
2022 Tongtong Liu, Joe McCalmon , **Md Asifur Rahman**, Cameron Lischke, Talal Halabi , Sarra Alqahtani  
"Weaponizing Actions in Multi-Agent Reinforcement Learning: Theoretical and Empirical Study  
on Security and Robustness", *International Conference on Principles and Practice of Multi-Agent  
Systems (PRIMA 2022)* .

- 2022 Tongtong Liu , **Md Asifur Rahman**, Joe McCalmon, Sarra Alqahtani "Explainability for Safety in Reinforcement Learning", *IEEE Symposium on Visualization for Cyber Security (VizSec 2022)*.
- 2022 Bodrunnessa Badhon, Mir Md. Jahangir Kabir , **Md Asifur Rahman**, Shuxiang Xu "SQ-FMFO: A Novel Scalarized Multi-Objective Q-Learning Approach for Fuzzy Membership Function Optimization", *International Journal of Fuzzy Systems*, doi:10.1007/s40815-022-01381-1 .
- 2022 Cameron Lischke, Tongtong Liu, Joe McCalmon , **Md Asifur Rahman**, Talal Halabi , Sarra Alqahtani "LSTM-Based Anomalous Behavior Detection in Multi-Agent Reinforcement Learning", *International Conference on Cyber Security and Resilience (CSR)* doi:10.1109/CSR54599.2022.9850343 .
- 2021 Apu Chandraw Shill, **Md Asifur Rahman**, "Plant Disease Detection Based on YOLOv3 and YOLOv4", *International Conference on Automation, Control and Mechatronics for Industry 4.0 (ACMI 2021)*, doi:10.1109/ACMI53878.2021.9528179 .
- 2017 **Md Asifur Rahman**, Boshir Ahmed, Md Ali Hossian, and Md Nazrul Islam Mondal, "An adaptive background modeling based on modified running gaussian average method", *International Conference on Electrical, Computer and Communication Engineering (ECCE)*, doi:10.1109/ECACE.2017.7912961.

## Skills

**Programming Language:** Python, C, C++, Java, Swift 2, Javascript, PHP

**Tech/Tools:** PyTorch, Tensorflow, SciPy, Scikit-learn, Numpy, Pandas, Keras, RLLib, Ray Tune, W&B, Open MPI, Regex, Git, Bootstrap, Django, Laravel, API, AWS, cPanel, L<sup>A</sup>T<sub>E</sub>X, Matlab, Smartsheet, MS Office Applications, Jira, Figma, Mural, Balsamiq, Qualtrics

**Operating System:** OSx, Linux, Windows, Ubuntu

**Database:** SQL, MySQL, MongoDB

## Projects (🔗 asifurrahman1)

### Language Skills

Bengali Native Language

English Proficient (Reading, Writing, Speaking, Listening)

### Review Activities

2023 PC member, Thirty-Eighth AAAI Conference on Artificial Intelligence (AAAI-24)

### Leadership Experience

2020-2021 Thesis supervision of Apu Chandraw Shill

2018 to 2021 Focal Point of the Department of Computer Science & Engineering, RUET.

2018 to 2021 Assistant Director, Mobile Games and Application Development Lab, RUET.

2017 to 2021 Course Advisor of 62 Undergraduate Student.

2017 to 2021 Treasurer, Dhaka Nibash Somiti (Community Organization), RUET, Bangladesh.

### Referees

#### Dr. Sarra Alqahtani

Assistant Professor,  
Department of Computer Science,  
Wake Forest University,  
Winston-Salem, North Carolina, USA.

📞 +1 (336) 758-3129

✉ sarra-alqahtani@wfu.edu

#### Dr. Boshir Ahmed

Professor,  
Department of Computer Science & Engineering,  
Rajshahi University of Engineering & Technology,  
Rajshahi, Bangladesh.

📞 +880 1713 228547

✉ boshir@cse.ruet.ac.bd