Md Asifur Rahman

3269 University pkway, 27106
Winston-Salem, NC, USA
☏ +1-336-582-3038
✉ rahmm21@wfu.edu
✺ Website

Education

Jan/2022 to Dec/2023 **(Expected)**	**Master of Science in Computer Science**, *Wake Forest University, North Carolina, USA*, **Dissertation title:** *Task-Agnostic Safe Reinforcement Learning* .
Feb/2012 to Oct/2016	**Bachelor of Science in Computer Science & Engineering**, *Rajshahi University of Engineering & Technology (RUET), Bangladesh*, **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* .

Professional Experience

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

Research Interest

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

Publications

2023	**Md Asifur Rahman**, Tongtong Liu, Sarra Alqahtani "Adversarial Behavioral Exclusion for Safe Reinforcement Learning", *32nd International Joint Conference on Artificial Intelligence (IJCAI 2023)*.
2023	Tongtong Liu, Joe McCalmon, Thai Le, **Md Asifur Rahman,** Dongwon Lee, Sarra Alqahtani "A novel policy-graph approach with natural language and counterfactual abstractions for explaining reinforcement learning agents Authors", *Autonomous Agents and Multi-Agent Systems* .

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   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.*

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).*

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).*

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).*

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, LaTeX, Matlab, Smartsheet, MS Office Applications, Jira, Figma, Mural, Balsamiq, Qualtrics
Operating System:	OSx, Linux, Windows, Ubuntu
Database:	SQL, MySQL, MongoDB
Data Mining/ML:	Regression, Classification, Parallel-SGD, Exploratory Data Analysis, Clustering, Association Rule Mining
Deep Learning:	Deep Neural Network, Convolutional neural network, Generative Network, Transformer Model
Reinforcement Learning:	Single and Multi-agent systems (MDP, CMDP, POMDP, IMDP), Safe Reinforcement Learning, Multi-armed bandits, Contextual Bandits, Behavior Cloning, Inverse Reinforcement Learning

Projects (⊙ asifurrahman1)

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