Md Kamran Chowdhury Shisher

Email: mzs0153@auburn.edu
Homepage: https://kamran0153.github.io/
GitHub: https://github.com/Kamran0153
Phone: 334 275 1413

EDUCATION

Ph.D. Candidate in Electrical Engineering — Aug. 2018-Present
Auburn University, AL
Advisor: Yin Sun

M.Sc. in Electrical Engineering, CGPA: 4.00 — Aug. 2022
Auburn University, AL

B.Sc. in Electrical and Electronic Engineering, CGPA: 3.80 — Sep. 2017
Rank: 21/214
Bangladesh University of Engineering and Technology (BUET), Bangladesh

RESEARCH INTERESTS

Communication Networks
Information Theory
Age of Information
Reinforcement Learning
Supervised Learning

PUBLICATIONS & UNDER REVIEW

[1] **Md Kamran Chowdhury Shisher**, Bo Ji, I-Hong Hou, and Yin Sun, "Freshness-aware Learning and Communication Co-design: Feature Length Selection and Transmission Scheduling" submitted to *IEEE Journal on Selected Areas in Information Theory*, 2023.

[2] **Md Kamran Chowdhury Shisher** and Yin Sun, "How Does Data Freshness Affect Real-time Supervised Learning?" submitted to *IEEE/ACM Transaction on Networking*, 2022. Available: http://webhome.auburn.edu/~yzs0078/TechnicalReportMobihoc22.pdf.

[3] **Md Kamran Chowdhury Shisher** and Yin Sun, "How Does Data Freshness Affect Real-time Supervised Learning?" *ACM MobiHoc*, 2022.

[4] **Md Kamran Chowdhury Shisher**, Heyang Qin, Lei Yang, Feng Yan, and Yin Sun, "The Age of Correlated Features in Supervised Learning based Forecasting", *IEEE INFOCOM AoI Workshop*, 2021.

[5] **Md. Kamran Chowdhury Shisher**, Tasmeen Zaman Ornee, and Md. Farhad Hossain, "QoS aware user association in massive MIMO enabled hetnets for DTU and NDTU traffic", *IEEE ICAEE*, 2017.

[6] **Md Kamran Chowdhury Shisher**, Tasmeen Zaman Ornee, and Yin Sun, "A Local Geometric Interpretation of Feature Extraction in Deep Feedforward Neural Networks", 2022. Pre-print available: https://arxiv.org/abs/2202.04632.

TEACHING

1. **Teaching Assistance:**

Courses

- ELEC-5970: Applied Statistical and Machine Learning, Auburn University — Spring 2023
- ELEC-2120: Signals and Systems, Auburn University — Fall 2022

- ELEC-7970: Reinforcement Learning, Auburn University Fall 2022
- ELEC-7970: Reinforcement Learning, Auburn University Spring 2022
- ELEC-7970: Reinforcement Learning, Auburn University Spring 2021
- ELEC-7970: Reinforcement Learning, Auburn University Spring 2020

Roles

ELEC-5970: Applied Statistical and Machine Learning:
Designed and conducted lab lectures on K-nearest neighbors algorithm, SVM, decision tree, XGBoost, neural network, image classification with transfer learning, text classification with LSTM.

ELEC-7970: Reinforcement Learning:
Designed and conducted lab lectures on value iteration, policy iteration, temporal difference, SARSA, Q-learning, deep Q network, and REINFORCE algorithms.

ELEC-2120: Signals and Systems:
Conducted labs on understanding and visualization of fundamentals properties of linear time invariant systems by using MATLAB and TIMS module.

2. **Lecturer** November 2017-June 2018
Bangladesh Army University of Science & Technology
Selected Courses:
EEE 4133: Telecommunication Engineering
EEE 3107: Electrical Properties of Materials
EEE 3203: Communication Engineering Sessional

TALKS

1. Communications of Timely Information for Real-time Machine Learning and Networked Intelligence, **NASIT**, University of Pennsylvania, Philadelphia, PA. Available: [Online]
2. How Does Data Freshness Affect Real-time Supervised Learning? **ITA**, San Diego, CA, 17 Feb. 2022. Available: [Online]
3. How Does Data Freshness Affect Real-time Supervised Learning? **ACM MobiHoc**, Seoul, South Korea, 18 Oct. 2022. Available: [Online]
4. An Interpretation of Information Freshness in Real-time Supervised Learning, **Ph.D. General Examination** (Proposal Defense), Auburn University. Available: [Online]
5. How Does Data Freshness Affect Real-time Supervised Learning? **Auburn University Research Symposium**. Available: [Online]
6. How Does Data Freshness Affect Real-time Supervised Learning? **the College of Engineering Research Showcase at the U.S. Space and Rocket Center**, Huntsville, AL, 2022.
7. The Age of Correlated Features in Supervised Learning based Forecasting", **IEEE INFOCOM AoI Workshop**, Virtual, 2021.

PROFESSIONAL MEMBERSHIP

- IEEE Student Member
- IEEE Information Theory Society Member
- IEEE Communication Society Member

- ACM SIGMOBILE Member

AWARDS

North American School of Information Theory NSF Travel Grant	2023
ACM SIGMOBILE Student Travel Grant	2022
IEEE INFOCOM Student Conference Grant	2021
IEEE INFOCOM NSF Student Conference Award	2021
Dean's Award, BUET, Bangladesh	2017
Dean's Award, BUET, Bangladesh	2016
Dean's Award, BUET, Bangladesh	2015
Best Cadet in Academic, Rangpur Cadet College, Bangladesh	2012
Dinajpur Board Scholarship, Bangladesh	2010

SERVICES

1. **TPC member**
IEEE WCNC, 2021
IEEE WCNC, 2022

2. **Reviewer for Journal Manuscript Submissions**:
IEEE Journal on Selected Areas in Information Theory, 2023
IEEE Open Journal of the Communications Society, 2023
IEEE Transactions on Wireless Communications, 2022
IEEE Journal on Selected Areas in Communication, 2020
IEEE Journal of Communications and Networks, 2020

3. **Reviewer for Conference Manuscript Submissions**:
IEEE ISIT, 2022
IEEE WCNC, 2022
IEEE INFOCOM, 2022
IEEE WCNC, 2021
IEEE INFOCOM, 2020
IEEE INFOCOM AoI Workshop, 2020
IEEE INFOCOM AoI Workshop, 2019

4. Maintainer of an online paper repository on Age of Information, 2018-Present
See: http://webhome.auburn.edu/ yzs0078/AoI.html

5. Organizing Secretary, Bangladesh Student Organization, Auburn University, 2022

6. House Cultural Prefect, Rangpur Cadet College, Bangladesh, 2011-2012

7. Junior Prefect, Rangpur Cadet College, Bangladesh, 2011