Akib Zaman

PHD STUDENT, EECS · MASSACHUSETTS INSTITUTE OF TECHNOLOGY

32 Vassar Street,32-321, Cambridge, MA 02139, USA

✉ akib@mit.edu

Research Interest

Robotics, Computer Graphics, Machine Learning, Computer Vision

Education

Massachusetts Institute of Technology   *Cambridge, MA, USA*
PH.D.CANDIDATE, ELECTRICAL ENGINEERING AND COMPUTER SCIENCE DEPARTMENT   *Date - present*
- Advisor: Mina Konaković Luković

Military Institute of Science and Technology   *Dhaka, Bangladesh*
B.SC. IN COMPUTER SCIENCE AND ENGINEERING   *Jan 2015 - Mar 2021*
- CGPA: 3.98/4.00
- Thesis Title: Digitalization of Battlefield Environment and Effect Analysis: Towards Developing an Effective IPB System Using Intelligent Object Detection

Professional Experience

2021-2023   **Lecturer**, Department of Computer Science and Engineering, United International University, Dhaka, Bangladesh
2022-2023   **Team Director and Advisor**, UIU Mars Rover Team, United International University, Dhaka, Bangladesh

Selected Publications

JOURNAL

Zaman, A., Majib, M.S., Tanjim, S.A., Siddique, S.M.A., Islam, S., Aadeeb, M.S., Khan, N.I., Haque, R., Islam, M.R.U., Faisal, M.R.F. and Malik, S., 2022. UVC-PURGE: A novel cost-effective disinfection robot for combating COVID-19 pandemic. Ieee Access, 10, pp.37613-37634.

Zaman, A., Majib, M.S., Tanjim, S.A., Siddique, S.M.A., Ashraf, F., Islam, S., Morshed, A.H.M.M., Shahid, S.T., Hasan, I., Samir, O. and Shafquat, S., 2022. Phoenix: Towards designing and developing a human assistant rover. IEEE Access, 10, pp.50728-50754

Hossain, B.A., Mukta, M.S.H., Islam, M.A., **Zaman, A.** and Schwitter, R., 2023. Natural Language Based Conceptual Modelling Frameworks: State of the Art and Future Opportunities. ACM Computing Surveys.

CONFERENCE

Zaman, A., Tahsin, A., Rahman, M., Akhter, R., Rahman, H., Mustary, S. and Farid, D.M., 2022, November. Emotion Detection for Children on the Autism Spectrum using BCI and Web Technology. In 2022 IEEE/WIC/ACM International Joint Conference on Web Intelligence and Intelligent Agent Technology (WI-IAT) (pp. 207-214). IEEE.

Zaman, A., Khan, R.T., Karim, N., Nazrul Islam, M., Uddin, M.S. and Hasan, M.M., 2022. Intelli-helmet: An early prototype of a stress monitoring system for military operations. In Information Systems and Management Science: Conference Proceedings of 3rd International Conference on Information Systems and Management Science (ISMS) 2020 (pp. 22-32). Springer International Publishing.

Mukta, M.S.H., **Zaman, A.**, Islam, M.A. and Hossain, B.A., 2022, September. Predicting Users' Eat-Out Preference from Big5 Personality Traits. In Congress on Intelligent Systems (pp. 511-523). Singapore: Springer Nature Singapore.

Hasan, A.R., **Zaman, A.**, Ghosh, P., Audry, T.T.B., Bhuiyan, F., Amit, A.K. and Mukta, M.S.H., 2022, December. Degrees of Anger Prediction from Speech. In 2022 25th International Conference on Computer and Information Technology (ICCIT) (pp. 318-323). IEEE.

Noor, A.S., Airin, A., Dawla, R.U., Hasan, A.R., Al Hasan, M., **Zaman, A.** and Farid, D.M., 2022, November. A Novel Method for Imbalanced Data Classification based on Label Reassignment. In TENCON 2022-2022 IEEE Region 10 Conference (TENCON) (pp. 1-6). IEEE.

Airin, A., Dawla, R.U., Noor, A.S., Al Hasan, M., Hasan, A.R., **Zaman, A.** and Farid, D.M., 2022, December. Attention-Based Scene Graph Generation: A Review. In 2022 14th International Conference on Software, Knowledge, Information Management and Applications (SKIMA) (pp. 210-215). IEEE.

Awards, Fellowships, & Grants

2021	**MIST Medal, Highest CGPA in the Department of Computer Science and Engineering**, Military Institute of Science and Technology (MIST), Dhaka, Bangladesh
	Seed-Funding Receiver in Portfolio StartUP, Innovation Design and Entrepreneurship Academy (IDEA), ICT Division, Bangladesh *$ 10000*
	**Team Lead	MIST Mongol Barota	University Rover Challenge(URC) 2021**, The Mars Society
2020	**Team Lead	Best Robotic System in Application Category	Medical Robotics Challenge for Contagious Disease**, UK Robotics and Autonomous Systems (UK-RAS) Network *$ 7000*
2018	**Best Overseas Student Officer	Highest score in Military, Academic, and Professional Exams, Officers' Commissioning Course CC163**, Royal Military Academy Sandhurst (RMAS), Camberley, UK

Teaching Experience

Teaching

2023	**CSE 2217/8: Data Structures and Algorithms - II, UIU, Bangladesh**, Lecturer (~ 40 students), *Summer*
	CSE 1115/6: Object Oriented Programming Language, UIU, Bangladesh, Lecturer (~ 45 students), *Spring*
	CSE 1111/2: Structured Programming Language, UIU, Bangladesh, Lecturer (~ 75 students), *Spring, Summer*
2022	**CSE 2215/6: Data Structures and Algorithms- I, UIU, Bangladesh**, Lecturer (~ 35 students), *Fall*
	CSE 1111/2: Structured Programming Language, UIU, Bangladesh, Lecturer (~ 90 students), *Summer, Fall*
	CSE 3301: Computer Architecture, UIU, Bangladesh, Lecturer (~ 40 students)*Spring, Summer*
	CSE 2233: Theory of Computation, UIU, Bangladesh, Lecturer (~ 35 students),*Spring*
2021	**CSE 1111/2: Structured Programming Language, UIU, Bangladesh**, Lecturer (~ 90 students), *Spring*
	CSE 2233: Theory of Computation, UIU, Bangladesh, Lecturer (~ 90 students), *Spring*
	CSE 429/30: Digital System Design, UIU, Bangladesh, Lecturer (~ 90 students), *Spring*
	CSE 421/2: Computer Graphics, UIU, Bangladesh, Lecturer (~ 25 students), *Summer*

Research Supervision

2021-2022	**Prediction of Soil Nutrients using Hyperspectral Satellite August**, Undergraduate Thesis Co-Supervision, UIU, Bangladesh
2022-2023	**Scene Graph Understanding using Attention Mechanism**, Undergraduate Thesis Co-Supervision, UIU, Bangladesh
	Meta-learning on Supervised Machine Learning Datasets, Undergraduate Thesis Co-Supervision, Department of CSE, UIU

Outreach & Professional Development

PROFESSIONAL SERVICE AND OUTREACH

2022	**4th International Conference on Machine Intelligence and Signal Processing (MISP 2022)**, Technical Program Committee Member	*Bangalore, India*
2021	**International Conference on Information Systems and Management Science (ISMS 2021)**, Reviewer	*Malta*

DEVELOPMENT

Certified Supply Chain Analyst (CSCA) under the International Supply Chain Education Alliance (ISCEA), the USA with 97% marks

Level 5 Diploma in Leadership and Management from Chartered Management Institute, London, UK; Learner Number: P04552151 (2017)

PEER REVIEW

IEEE Access

PROFESSIONAL MEMBERSHIPS

IEEE Student Member

OTHER ACTIVITIES

Won Several National and College Level Debate (Asian and British Parliamentary) Competition
Completed a Full Marathon (42.1 Km) and Two Half Marathon (21.1 Km)
Love to play Table Tennis and Badminton

References

Mina Konaković Luković   *Cambridge, MA, USA*
ASSISTANT PROFESSOR, EECS, MIT

Iman Dehzangi   *Camden, NJ, USA*
ASSISTANT PROFESSOR, DEPARTMENT OF CS, RUTGERS UNIVERSITY

Salekul Islam   *Dhaka, Bangladesh*
PROFESSOR, DEPARTMENT OF CSE, UIU