DR. MOHAMMAD MAHMUDUL ALAM [MLD]

Assistant Professor

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Biography

Mohammad Mahmudul Alam, Ph.D. is a deep learning specialist with over six years of hands-on experience, including internships at Amazon Web Services (AWS) and Analog Devices Inc. (ADI). He has a strong track record of publications in prestigious conferences such as NeurIPS, ICML, AISTATS, AAAI, KDD, and CVPR. Dr. Alam earned his Ph.D. and M.Sc. in Computer Science from the University of Maryland, Baltimore County (UMBC) and his Bachelors in Electrical and Electronic Engineering from Bangladesh University of Engineering and Technology (BUET).

Research Areas

▪ Artificial Intelligence & Robotics

Research Interests

Deep Learning, Computer Vision, Generative AI, Sequence Modeling, Natural Language Processing

Teaching

▪ CSE 445 Machine Learning

▪ CSE 440 Artificial Intelligence

▪ CSE 115 Programming Language I

▪ CSE 115L Programming Language I Lab

Selected Publications

Journals

▪ Mohammad Mahmudul Alam, Mohammad Tariqul Islam, S. M. Mahbubur Rahman, “Unified learning approach for egocentric hand gesture recognition and

fingertip detection," Pattern Recognition, Elsevier Science Publishers, 2022

Conference Papers

▪ Mohammad Mahmudul Alam, Alexander Oberle, Edward Raff, Stella Biderman, Tim Oates, James Holt, "A Walsh Hadamard Derived Linear Vector Symbolic Architecture," In 38th Annual Conference on Neural Information Processing Systems (NeurIPS), Vancouver, Canada, 2024

▪ Mohammad Mahmudul Alam, Edward Raff, Stella Biderman, Tim Oates, James Holt, "Holographic Global Convolutional Networks for Long-Range Prediction Tasks in Malware Detection," In 27th International Conference on Artificial Intelligence and Statistics (AISTATS), Valencia, Spain, 2024

▪ Mohammad Mahmudul Alam, Edward Raff, Stella Biderman, Tim Oates, James Holt, "Recasting Self-Attention with Holographic Reduced Representations," In 40th International Conference on Machine Learning (ICML), Honolulu, HI, USA, 2023

▪ Mohammad Mahmudul Alam, Edward Raff, Tim Oates, James Holt, "Deploying Convolutional Networks on Untrusted Platforms Using 2D Holographic Reduced Representations," In 39th International Conference on Machine Learning (ICML), Baltimore, MD, USA, 2022