

Saaduddin Mahmud

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Education

B.Sc. in Computer Science and Engineering

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING, UNIVERSITY OF DHAKA

- CGPA: 3.86/4.00

Dhaka, Bangladesh

January, 2016 - January, 2020

Experience

Cognitive Agents & Interaction Lab, University of Dhaka

FULL-TIME RESEARCH ASSISTANT

February, 2020-Present

- Applying Reinforcement Learning for Multi-Agent Coordination.
- Applying Reinforcement Learning and Game-Theory to improve security resource allocation.
- Mentoring undergraduate students associated with the lab on final year research project.

Publications

1. Saaduddin Mahmud, Md. Mosaddek Khan, Moumita Choudhury, Long Tran-Thanh, and Nicholas R. Jennings. Learning optimal temperature region for solving mixed integer functional DCOPs. In *Proceedings of the 29th International Joint Conference on Artificial Intelligence*, 2020
2. Saaduddin Mahmud, Moumita Choudhury, Md. Mosaddek Khan, Long Tran-Thanh, and Nicholas R. Jennings. AED: An anytime evolutionary DCOP algorithm. In *Proceedings of the 19th International Conference on Autonomous Agents and Multi-Agent Systems*, 2020
3. Moumita Choudhury, Saaduddin Mahmud, and Md. Mosaddek Khan. A particle swarm based algorithm for functional distributed constraint optimization problems. In *Proceedings of the Thirty-Fourth AAAI Conference on Artificial Intelligence*, 2020
4. Saaduddin Mahmud and Moumita Choudhury (Equal Contribution). *Applying Population-Based Algorithms to Solve Large (F)DCOPs*. Department of Computer Science and Engineering, University Of Dhaka, 2020

Current Research Projects

1. Saaduddin Mahmud, Md. Mosaddek Khan, and Nicholas R. Jennings. *On Population-Based Algorithms for Distributed Constraint Optimization Problems*. Under Review, 2020
2. Using Reinforcement Learning for Multi-Agent Coordination and Allocation of Security Resources. On going research project as a part of the ICT Innovation Grant, 2020.

Honors & Awards

- 2016 **1st in junior deviation**, Battle of Brains - 2016 (Competitive Programming), University Dhaka
- 2017 **1st Runner up**, Battle of Brains - 2017 (Competitive Programming), University Dhaka
- 2017 **Participated**, ACM International Collegiate Programming Contest, Dhaka Regional

Skills

Languages Python, Julia, C/C++, Ruby, Java

Web JavaScript, Flask

Databases MySQL, Oracle, MongoDB

Library Pytorch, Fast.ai

Hardware Level: MIPS, NASM Assembler, Nvidia CUDA

Academic Projects

AL.GO (See project)

A PROJECT WRITTEN IN JAVA TO VISUALIZE WELL KNOWN ALGORITHMS.

2017

- Step by step algorithm Visualizer.
- Contains codes, problem links on specific topic to help students learn faster.

MuSync (See project)

AN ANDROID APPLICATION FOR MUSIC SYNCHRONIZATION ACROSS MOBILE DEVICES.

2017

- Music synchronization across different mobiles.
- Social-network for sharing music.

EasyML (See project)

A WEB APPLICATION WRITTEN IN PYTHON FOR AUTOMATED DATA VISUALIZATION AND CLASSIFICATION.

2018

- Automated data visualization and classification.
- Fast hyper-parameter optimization for different classifiers.

Reference

DR. MD. MOSADDEK KHAN

- Assistant Professor, Department of Computer Science and Engineering
University of Dhaka
mosaddek@du.ac.bd