JAHIR SADIK MONON

github ⋄ linkedIn ⋄ academic site ⋄ mail

EDUCATION

University of Dhaka　　　　　　　　　　　　　　　　　　　Dhaka, Bangladesh
B.Sc. (Hons) in Computer Science and Engineering　　　　　　　　　　　*2019 - 2023*
CGPA: 3.93/4.00 | Ranked 1st in class | Advisor: Dr. Md Mosaddek Khan
Thesis: *Learning to Cooperate Among Heterogeneous Agents in Sparse Reward Environments*[1]

Dhaka College　　　　　　　　　　　　　　　　　　　　　Dhaka, Bangladesh
Higher Secondary School Certificate | GPA: 5.00/5.00　　　　　　　　　　*2016-2018*

Government Laboratory High School, Dhaka　　　　　　　　　Dhaka, Bangladesh
Secondary School Certificate | GPA - 5.00/5.00　　　　　　　　　　　　*2008-2016*

EXPERIENCES

Center for Computational & Data Sciences, IUB | CCDS　　　　　*2024 - present*
Research Assistant　　　　　　　　　　　　　　　　　　　Dhaka, Bangladesh

- Currently involved in research projects on Reinforcement Learning, Multi-modal learning. Working on agent-based planners, hierarchical RL, multi-modal mixture-of-experts (MoE) integration, and chain-of-thought (CoT) based reasoning.
- Advisors: Dr. Amin Ahsan Ali and Dr. AKM Mahbubur Rahman

Coding for All Initiative, IUB | Coding for All Initiative　　　　　　*2024 - present*
Tutor　　　　　　　　　　　　　　　　　　　　　　　　Dhaka, Bangladesh

- Tutored undergraduate students in the CIS-101 courses, which covered topics including Introduction to Python programming language, Application development using Microsoft PowerApps, Introduction to Artificial Intelligence, Prompt Engineering, and other technologies.

RESEARCH INTEREST

Reinforcement Learning
My primary research interest is in Reinforcement learning (RL). I am actively exploring recent research in this domain as part of my research projects in CCDS and concurrently learning from online resources. Also interested in robot learning, hierarchical RL, safe RL, learning from demonstrations, etc.

Multi-Modal Learning
Recent advances in its use in system understanding and multi-modal reasoning led me to explore agent-based planners, robust multimodal reasoning, and mixture-of-experts based researches in CCDS.

HONORS & AWARDS

DataVerse Challenge - ITVerse 2023	Finalists	*2023*
Robi bdapps Ideathon, Dhaka University	2nd Runner-up	*2023*
Hult Prize Impact Summits	Campus Champion & Regional Finalists	*2021*
Bangladesh Mathematical Olympiad Regional	Runner-up (Junior)	*2013*
Bangladesh Mathematical Olympiad Regional	Champion (Junior)	*2012*

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[1] Under review in Machine Learning Journal - Springer

SELECTED PROJECTS

DUStudyLink | Backend Developer & Database Management | repo   *2023*
My responsibilities in the development of this Web application included database schema design, coding data-model classes, and integration with Firebase Firestore.

Salvare | Backend Developer & Database Management | repo   *2021*
During the development of this Android application, my responsibility was to use the Flutter framework and the Dart programming language to create the user interface, data model classes, control user navigations, and local database handling using SQL. This application can be used for storing online resources with various categorizing, searching, and filtering features.

Apellai | Backend Developer & Database Management | repo   *2021*
It is an online music streaming application for android phones. My responsibility in development was to handle the API calls from streaming services, design the database schema in PostgreSQL, and code the backend functions using the Kotlin language in Android Studio.

!Typo | Backend & Frontend Developer | repo   *2019*
A Windows-based journal application entirely written in the C programming language. I used the SDL library for Graphical User Interface.

Other projects on application development, machine learning, etc., can be found on my github.

COURSES & CERTIFICATES

Fundamentals of Reinforcement Learning	Coursera	*2022-23*
Introduction to Reinforcement Learning by David Silver 2015	Youtube	*2022-23*
Deep Learning Specialization	Coursera	*2022-23*
Intro to Machine Learning	Kaggle	*2022*
Intermediate Machine Learning	Kaggle	*2022*
Python for Everybody 4 Course Specialization	Coursera	*2020*

TECHNICAL SKILLS

Programming Languages	Python, C, C++, Java, Dart, Kotlin, SQL, Assembly
Software & Tools	LaTeX, Git, Flutter, Android Studio, MySQL, PostgreSQL, RegEx
Python Packages	Pandas, Matplotlib, Numpy, Jupyter, PyTorch, Scikit-Learn
	BeautifulSoup, Selenium, Seaborn, Requests, Urllib

OTHERS

Experience

- Writing Higher Secondary ICT guide book | iPublications   *2020*
- Dhaka regional school football | Regional Champion   *2016*
- Executive member at Science Club of The Laboratorians   *2013-16*

REFERENCE

Dr. Md. Mosaddek Khan | University Website | Personal Website
Associate Professor,
Department of Computer Science and Engineering, University of Dhaka

Dr. Amin Ahsan Ali | University Website | CCDS Website
Associate Professor,
Department of Computer Science and Engineering, Independent University, Bangladesh