MD. AL-MUSTANJID

Dhaka, Bangladesh

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RESEARCH EXPERIENCE

Research Assistant (Part-time)   **Mar 2021 - Present**
Centre for Advanced Machine Learning & Applications (CAMLAs) ↗

🏷 Data mining, Pattern Recognition, ML, Bioinformatics, Systems Biology

- Developed an analytical framework with the application of *bioinformatics and systems biology methodologies* under the supervision of Dr. SM Hasan Mahmud and Dr. Mohammad Ali Moni to enhance the early prediction and diagnosis of illness outcomes by analyzing disease progression, particularly in difficult and chronic conditions with the ultimate goal of redesigning therapeutics with more effectiveness.
- Led the development of 1 research project to explore the latest molecular insights and therapeutics conveyed between diseases (COVID-19 and Psychological disorder) through applying bioinformatics and systems biology methodologies and tools.
- Analyze a large pool of **OMICS** data derived from disease samples with specific characteristics to spot early molecular alterations before the onset and progression of diseases.
- Guided 2 undergraduate students in **microarray data** analysis in R language environment, research procedures, and evaluation of complex biological data.

Reviewer, Publons ↗   **Apr 2022 - Present**

- Peer reviewed 2 articles for Informatics in Medicine Unlocked (Elsevier Open Access Journal)

PUBLICATIONS

- An Integrated Bioinformatics and System Biology Approaches to Identify Synergistic Effects of COVID-19 on Physiological Disorders for discovering therapeutics targets. **Md. Al-Mustanjid**, Saleheen Khan Sazol, S M Hasan Mahmud, Hosney Jahan, Dip Nandi, Md Habibur Rahman. (*Under Review) *Heliyon*

- **Al-Mustanjid, M.**, Mahmud, S. H., Akter, F., Rahman, M. S., Hossen, M. S., Rahman, M. H., & Moni, M. A. (2022). Systems biology models to identify the influence of SARS-CoV-2 infections to the progression of human autoimmune diseases. Informatics in medicine unlocked, 32, 101003. [Paper]

- Mahmud, S. H., **Al-Mustanjid, M.**, Akter, F., Rahman, M. S., Ahmed, K., Rahman, M. H., & Moni, M. A. (2021). Bioinformatics and system biology approach to identify the influences of SARS-CoV-2 infections to idiopathic pulmonary fibrosis and chronic obstructive pulmonary disease patients. Briefings in Bioinformatics, 22(5), bbab115. [Paper]

- **Al-Mustanjid, M.**, Mahmud, S. H., Royel, M. R. I., Rahman, M. H., Islam, T., Rahman, M. R., & Moni, M. A. (2020). Detection of molecular signatures and pathways shared in inflammatory bowel disease and colorectal cancer: A bioinformatics and systems biology approach. Genomics, 112(5), 3416-3426. [Paper]

- Rahman, M., Rahman, Z., **Al-Mustanjid, M.**, Uddin, M. S., & Jany, M. H. R. (2020, February). Software Process Improvement Based on Defect Prevention Using Capability and Testing Model Integration in Extreme Programming. In International Conference on Cyber Security and Computer Science (pp. 270-279). Springer, Cham. [Paper]

PUBLICATIONS (CONTINUE)

- Hossen, M. S., Rahman, M. H., **Al-Mustanjid, M.**, Nobin, M. A. S., & Habib, M. A. (2019, December). Enhancing Quality of Service in SDN based on Multi-path Routing Optimization with DFS. In 2019 International Conference on Sustainable Technologies for Industry 4.0 (STI) (pp. 1-5). IEEE. [Paper]

- **Arif, A. M.**, Mandal, C., & Rahman, M. H. (2019). Design of a common pathway drug for all types of cardiovascular diseases: A network biology approach. Network Biology, 9(2), 28-41. [Paper]

RESEARCH INTERESTS

Data Mining, Machine Learning, Pattern Recognition, Bioinformatics

PROFESSIONAL EXPERIENCE

Software Engineer, Development Research Network-Dnet 🔗   **Mar 2022 - Present**
Junior Software Engineer, Development Research Network-Dnet 🔗   **Feb 2021 - Feb 2022**

Role & Responsibilities as Software Engineer:

- Utilizing **Laravel MVC Framework, PHP, JS, MySQL, Git, jQuery, Ajax, and Bootstrap tech stack.**
- Developing integrated admin panel to provide a more flexible and reliable platform that aided program team members in collecting data and generating reports for more than *300* schools and its corresponding affiliate sub-programs.
- Constructing and managing a customized monitoring and assessment platform for *1200* participants' of the British Council's EDGE project using **Google AppScript (JS)** on Google Sheet platform.
- Optimizing queries and managing eloquent relationships to balance and load data in a SQL database management system.
- Building customized Moodle-based digital educational portal systems with a target audience of more than *2,000* participants to enable e-learning environments that focus major emphasis on social awareness and impact.
- Applying quality control procedures, test applications in accordance with system design, role management, security concerns and repair issues.

TECHNICAL SKILLS

Programming Languages	C, Php, Javascript, R, Python
Database	MySQL, Nosql
Developer Tools	VS Code, Eclipse, Trello, Visio, LaTeX
Version Control	Git, Github

TRAINING & OUTREACH

Training

2021	Course: An Introduction to Peer Review, Institution: Web of Science Academy
	Course: Reviewing in the Sciences, Institution: Web of Science Academy
2020	Course: Object-oriented analysis and design, Institution: DevSkill

Outreach

2020	Founder of Bioseekers Lab - A group of people committed to solving biological problems

EDUCATIONAL QUALIFICATION

B.Sc. in Software Engineering   **Jan 2015 - Mar 2019**
Daffodil International University, Dhaka, Bangladesh   **CGPA: 3.35/4.00**
Thesis Dissertation: Risk Assessment and Drug Design using R: Heart Diseases ↗ [Source]

SELECTED PROJECTS

CAMLAs - A research lab website ↗   **May 2022**

- Being a Research Assistant of the CAMLAs and also as a Software Engineer, I have built this website with basic frontend technologies (HTML5, CSS3 and Js) to showcase our visions and research works.

Travo - A Travel Blog ↗ | Node.js, Express.js, Mongodb   **Apr 2018**

- It is an online publishing blog where travellers can share their adventures. Adventures would share their adventures through stories including images, and places. One traveller can comment on other travellers' posts & rate them as well as share.

Giftz - A shopping store ↗ | ASP.NET & WEB Technologies   **Sep 2017**

- Giftz is a shopping store as well as an e-commerce site too. By Giftz people can buy or gift superior products.

LANGUAGE PROFICIENCY

English   Fluent working proficiency

AWARDS & ACHIEVEMENTS

Research Award

2022, 2021   Awarded in recognition of scholarly publications for the years of 2020 and 2021 from Division of Research, Daffodil International University

Scholarship

2015-2018   Merit scholarship, Department of Software Engineering, Daffodil International University
2009   Govt. Junior Scholarship, Ministry of Education, Bangladesh
2006   Govt. Primary Scholarship, Ministry of Education, Bangladesh

REFERENCES

Dr. Mohammad Ali Moni   **Dr. SM Hasan Mahmud**
Senior Lecturer   Assistant Professor
The University of Queensland   Department of Computer Science
Brisbane QLD 4072 Australia   American International University, Bangladesh