Habibur Rahman

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Research Interests

I have 7+ years of experience as a Research Assistant and Software Development Engineer, specializing in Solid State Drives, Operating Systems, Generative AI, and Machine Learning.

Education

2024 MS in Computer Science
Gyeongsang National University (GNU)
CGPA: 4.0/4.5

2019 BS in Computer Science and Engineering
Daffodil International University (DIU)
CGPA: 3.74/4.0

Publications

- **Eshyana: The SSD Simulator Exploring the Inner Workings of Solid-State Drives**. Presented in the proceedings of the 31st Korean Conference on Semiconductors (KCS), South Korea, 2024.
- **Eshyana: The Quantum Computer Simulator**. Presented in the 21st International Symposium on the Physics of Semiconductors and Applications (ISPSA), South Korea, 2024.
- **Dengue Fever Prediction**. Presented, and published at the Fifth International Conference on Information and Communication Technology for Competitive Strategies (ICTCS-2020), Jaipur, Rajasthan, India, 2020.
- **Helping healthcare providers to differentiate COVID-19 pneumonia by analyzing digital chest x-rays: role of artificial intelligence in healthcare practice**. Published in the International Journal of Biomedicine (IJBM), USA, 2020.

Current Projects

Eyana: The SSD Simulator Exploring the Inner Workings of Solid-State Drives

This project presents an innovative, web-based SSD simulator that provides immersive visualizations of NAND flash memory and SSD architecture. Easy to access and use, in a survey of 1,000 students, 97.1% said it significantly reduced their learning time.

Eshyana: The Quantum Computer Simulator

A user-friendly Quantum Computer Simulator revolutionizing understanding through interactive exploration. Bridging theory with practice, it makes quantum computing accessible and engaging worldwide.

Working Experience

Gyeongsang National University

Research Assistant Feb 2023 - Current

I lead a project focused on creating a simulator for Solid State Drives (SSDs) and implementing machine learning methods to analyze SSD trace files. Additionally, I aim to develop a Quantum Computing Simulator as part of this endeavor.

Daffodil Software Limited

Software Development Engineer Sep 2019 - Feb 2023

During my tenure at Daffodil Software Limited, I led research initiatives that resulted in the publication of two papers; 'Dengue Fever Prediction' and 'Helping healthcare providers to differentiate COVID-19 pneumonia by analyzing digital chest x-rays: the role of artificial intelligence in healthcare practice.' Additionally, I spearheaded a project focused on detecting COVID-19 from chest X-rays, which received significant coverage from both international and local media outlets.

ResPay

Software Development Engineer Jan 2018 - Sep 2019

During my remote position at ResPay, a company based in Dallas, Texas, I led the development of the ResPay application. I implemented best practices in mobile app development, including responsive design for various screen sizes, robust user authentication, and secure data handling. I established RESTful APIs for seamless server communication, integrated real-time databases for enhanced user interaction, and optimized performance for smooth app functionality across multiple devices.

Daffodil International University

Teaching Assistant Jan 2016 - Apr 2018

Problem Solving Lab (CSE123), Data Structure Lab (CSE135), Object Oriented, Programming Lab (CSE215), Algorithms Lab (CSE222)

Awards

- Best abstract award (The 31st Korean Peninsula Society of Chemistry 2024)
- Best use of Data in Nasa Space Apps Challenge.
- Third Position in the DIIT programming contest
- Champion at DIU apps contest
- Employee of the Year at Daffodil Software Limited

Programming Languages:

Language: Python, Java, Bash, C, Javascript