Hasibul Hasan Rupok

BSc in Computer Science and Engineering

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Education

Bachelor of Science in Computer Science and Engineering
United International University
United City, Dhaka 1212
Jan. 2020 - Dec. 2023
- CGPA: 3.92/4.0
- Group: Science

Higher Secondary Certificate
Majid Zarina Foundation School & College
Naria, Shariatpur
2017 - 2019
- GPA: 5.0/5.0
- Group: Science

Secondary School Certificate
Majid Zarina Foundation School & College
Naria, Shariatpur
2017 - 2019
- GPA: 5.0/5.0
- Group: Science

Experience

Lecturer at the Department of Computer Science & Engineering
Uttara University
Beribadh Road, Dhaka 1230
Aug. 2024 – Ongoing
Courses:
- CSE 225: Data Structures and Algorithms
- CSE 3103: System Analysis & Design
- MATH4107: Statistics & Queuing Theory

Contractual Lecturer at the Department of Computer Science & Engineering
United International University
United City, Dhaka 1212
Jan. 2024 – July 2024
Courses:
- CSE 1325: Digital Logic Design
- CSE 2233: Theory of Computation
- CSE 2213: Discrete Mathematics
- CSE 1112: Structured Programming Language Laboratory
- CSE 1326: Digital Logic Design Laboratory
- CSE 2216: Data Structures and Algorithms I Laboratory

Teaching Assistant
Center for Development of IT Professionals (CDIP)
United City, Dhaka 1212
Jan. 2024 – May 2024
Teaching assistant for the 'Introduction to Python and Big Data Analysis' course, facilitating learning through lectures, labs, and one-on-one support for students

Undergraduate Teaching Assistant
United International University
United City, Dhaka 1212
Fall 2022 - Fall 2023
Courses:
- CSE 2218: Data Structures and Algorithms Laboratory II Laboratory
- CSE 4165: Web Programming
- CSE 1112: Structured Programming Language Laboratory
- CSE 1116 Object-Oriented Programming Laboratory

Grader at the Department of CSE
United International University
United City, Dhaka 1212
Spring 2023 - Summer 2023
The role was checking the answer script and preparing the grade sheet.

Public Relation Executive
UIU Computer Club
United City, Dhaka 1212
Mar 2022 - Jun 2023
The key responsibility was to manage and maintain the public image and perception.

Instructor
UIU App Forum
United City, Dhaka 1212
Jan 2023 - Dec 2023
The key responsibility is to take sessions on Structured Programming Language, Web Programming, and Digital Image Processing.

Publications

ElectroSortNet: A Novel CNN Approach for E-Waste Classification and IoT-Driven Separation System.
Author(s): **Hasibul Hasan Rupok**, Nahian Sourov, Sanjida Jannat Anannaya, Amina Afroz, Mahmudul Hasan Bipul, Md. Motaharul Islam.

Workshop

Programming For Beginners, Python Edition.
Conducted an introductory workshop aimed at teaching fundamental Python programming concepts to beginners that the UIU App Forum organized. I was the workshop's instructor, covering topics including variables, data types, control structures, loops, functions, and basic algorithms. Designed interactive sessions and practical exercises to reinforce learning. Tailored content to suit the needs of participants with no prior programming experience.
Roles:
- Developed workshop curriculum and materials.
- Delivered engaging presentations and demonstrations.
- Facilitated hands-on coding exercises and provided individualized assistance.

Computronix Academy Spring 2024 | Data Structure and Algorithms II
Conducted a problem-solving session on Data Structure and Algorithm-2 for UIU students before their mid-term exam which was organized by the UIU App Forum. I was the instructor of that session, where I briefly discussed all the topics, and solved 2 previous mid-questions, and individual problems that helped the students to clarify doubts and to achieve good marks in the exam.

Skills

Programming	JAVA, Python, C, C++
Back-end	Django, NodeJS, ExpressJS, PHP, REST API
Front-end	ReactJS, HTML5, CSS3, Bootstrap, TailwindCss, JavaScript
Database	MySQL, MongoDB
Languages	Bangla, English, Hindi
Data-Analysis	Python, NumPy, Pandas, SQL, MongoDB, Power BI
Miscellaneous	Machine Learning, Deep Learning, Postman, Figma, Photoshop

Projects

Chittagonian Dialect to Standard Bangla Translation.
Developed a language translation model focusing on converting the Chittagonian dialect to standard Bangla, utilizing cutting-edge Transformer architecture.
- Prepared a novel bilingual dataset (Bangla and Chittagonian).
- Leveraged Transformer models for language conversion.
- Successfully trained a model for Chittagonian dialect conversion.
- Contributed to bridging linguistic gaps between regional dialects and standardized languages.

ElectroShortNet a Novel CNN Approach to Classify E-Waste and IoT-based Separation System.
Led the development of ElectroShortNet, a novel IoT-based system for automated e-waste classification utilizing a novel dataset.
- Spearheaded the creation of a specialized dataset comprising diverse e-waste materials for training and validating ElectroShortNet.
- Developed and implemented ElectroShortNet, integrating a custom ResNet-based architecture with a squeeze-and-excite block for accurate e-waste classification.
- Designed an innovative IoT-based system allowing real-time automated identification and categorization of electronic waste items.

Course Assigner for Educational Institutions.
It is a web application that helps to assign courses to faculties.
- Need to upload course and faculty lists in Excel or CSV format.
- Implemented drag-and-drop functionality to assign courses to faculties.
- Provide semantic error messages for conflicts in time, sections, etc.
- Enable exporting of prepared routines in Excel or CSV format.

Enhancing Machine Learning Security with Blockchain.

Implemented a basic blockchain structure in Java to securely store parameters of a linear equation, mimicking machine learning model parameters.

- Implemented blockchain structure in Java for secure storage of machine learning model parameters.
- Simulated a linear equation model and stored its parameters using blockchain technology.
- Validated blockchain integrity through hash functions and reference checks.

Tour Planner BD.

It is a web application that will help the user from planning their tour, executing, and ending their tour.

- Implement a dynamic blog-based news portal.
- Implement a fully functional and industry-quality ticket booking system.
- Implement a hotel booking system, sorting based on price, location, etc.
- Tourists can find a tour guide, and local people can apply as a tour guide, payment is on an hourly basis.
- Free books are available to read for free by using Google Book API.

Honors & Awards

Fall-2022	1st Runner-Up in SAD Lab	CSE Project Show - UIU
Fall-2022	1st Runner-Up in Microprocessor Lab	CSE Project Show - UIU
Summer-2022	2nd Runner-Up in DBMS Lab	CSE Project Show - UIU
Summer-2020	50% Tuition Fee Scholarship	United International University
Fall-2020	100% Tuition Fee Scholarship	United International University
Spring-2021	100% Tuition Fee Scholarship	United International University
Summer-2021	50% Tuition Fee Scholarship	United International University
Fall-2021	100% Tuition Fee Scholarship	United International University
Spring-2022	100% Tuition Fee Scholarship	United International University
Summer-2022	100% Tuition Fee Scholarship	United International University
Fall-2022	100% Tuition Fee Scholarship	United International University
Spring-2023	100% Tuition Fee Scholarship	United International University
Summer-2023	100% Tuition Fee Scholarship	United International University
Fall-2023	100% Tuition Fee Scholarship	United International University

References

Dr. Mohammad Nurul Huda
Professor & Head of the Department
Department of Computer Science and Engineering
United International University
Email: mnh@cse.uiu.ac.bd

Suman Ahmmed
Associate Professor & Director of CDIP
Department of Computer Science and Engineering
United International University
Email: suman@cse.uiu.ac.bd