# MD. Hosain Mahmud

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### **Professional Summary**

4th-year Computer Science student specializing in DSA and machine learning, with a strong foundation in web development. Experience in developing back-end-focused applications using Node.js, Express, MongoDB, and integrating payment systems with Stripe. Currently conducting research in freshwater macro-invertebrate detection using transfer learning, applying cutting-edge techniques in image recognition. Interested in leveraging technical skills and research experience in real-world applications, with a focus on solving complex problems and advancing career goals in technology and machine learning.

## **Key Skills**

- Programming Languages: C/C++, Python, JavaScript, Dart, PHP
- Frameworks Libraries: Node.js, Express, Flutter, React, Pug
- Databases: MongoDB, MySQL
- Machine Learning Deep Learning: Transfer Learning, Image Recognition, NLP
- Tools Technologies: Git, REST APIs, LaTeX, Overleaf, Stripe Integration,

#### Education

**Shanto Mariam University of Creative Technology**, B Sc in Computer Science and Engineering

Dec 2020 -

- GPA: -/4.0
- Coursework: OOP, DSA, Operating System, Data Mining, Machine Learning

#### **Experience**

- Research Project: Freshwater Macro-invertebrates Detection Using Transfer Learning Conducted research on applying transfer learning to identify freshwater macro-invertebrates, using deep learning techniques for image recognition. Developed a pipeline for model training, testing, and evaluation to contribute to advancements in ecological monitoring.
- Web Development Project: Tourism Booking Platform Designed and developed a Web application focused on the back end to facilitate tourism bookings. We used Node.js, Express, and MongoDB to create a robust system for managing tours and guide reservations with payment integration via Stripe.
- Mobile App Development Project: Flutter App Built a mobile app using Flutter, focused on providing an interactive and responsive user experience. I worked on features such as user authentication, data storage, and user interface/user experience design to enhance user engagement.

#### **Projects**

#### Personal Portfolio

https://github.com/Hosain199/personal-portfolio-with-nodeJs

- Designed and developed a personal portfolio website to showcase skills, projects, and achievements.
- Implemented a responsive user interface using ReactJs, focusing on clean and intuitive design.
- Built a back-end server with NodeJs, enabling dynamic content rendering and efficient API integration.
- Integrated secure contact forms and user interaction features to enhance engagement.
- Followed best practices in code organization, component-based architecture, and styling for easy maintenance.

#### Violina: A Seamless Music Streaming Website

https://github.com/Hosain199/Violin

- Built a music streaming platform with smooth navigation and real-time audio streaming capabilities.
- Developed a responsive user interface using HTML and CSS for an engaging user experience.
- PHP for back-end functionality and JSON for efficient data handling and storage.
- XAMPP is deployed locally for testing and debugging.

## **Competitions Achievements**

- National Undergraduate Math Olympiad: Participated in the national-level mathematics competition in 2023 and place 25th among 162 participant.
- ICPC Preliminary Round Competed in the prestigious ICPC.
- Intra-University Hackathon Participated in a university-level hackathon and Won second place out of 50 teams.
- Codeforces Regular Participant Active participant in Codeforces programming contests.