

# Mahmudul Ahsan

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## Experience

**MyMedicalHub International** | Jr. Software Engineer Jul 2025 - Present

- Contributed to building AI-integrated web applications, implementing **component-based design** and integrating **automated user interactions via voice**. Worked on **human annotation modules** for AI workflows and participated in **modernizing legacy codebases** into newer, efficient design technologies.

**Vivasoft Limited** | Front-end Intern Oct 2023 - Mar 2024

- Contributed to **front-end development** of the company's Visitor Management System. Developed optimized UI components using **React.js** and **Tailwind CSS**, collaborating in an **Agile** team with **Git** and version control best practices.

## Technical Skills

- Project Management & Version Control:** Git, GitHub, Azure DevOps (Repos & Boards), Notion
- Programming Languages:** C, C++, Java, JavaScript, TypeScript, Python, HTML, LaTeX
- Frontend:** React, Nextjs, CSS, Sass (SCSS), Tailwind CSS, DaisyUI, Bootstrap, Shadcn, Jest, Redux
- Backend:** Node.js, Express.js, Sequelize ORM
- Database:** SQL, MySQL, NoSQL, MongoDB, Firebase
- Familiar With:**
- Solved **500+** algorithm and data structure problems in C/C++ across Codeforces, LeetCode and LightOJ

## Projects

**ScribeLogs - AI-Powered Chrome Extension** | React, Node.js, Express.js, Firebase, TailwindCSS, DaisyUI

- Developed a Chrome extension that summarizes YouTube videos by extracting transcripts and using the **OpenAI API**. Optimized costs by storing pre-generated summaries in Firestore and handling user queries by sending only the summary instead of the full transcript, enabling efficient chatbot-style interactions.

**Hospital Billing Management** | React, Express.js, Sequelize ORM (MySQL), Firebase Auth, TailwindCSS, Ant-Design

- Built a hospital management and billing app using React.js and Tailwind CSS, with localStorage caching to reduce read/write load. Optimized UI performance and integrated dynamic reports for actionable admin insights.

**LogicLifters - Course Management Site** - [Link](#) | React, Firebase, TailwindCSS

- Developed a dynamic course management website with an admin panel to add new courses and content, enabling users to access course materials directly from the platform.

**E-Dars - Quran & Islamic Course Site** - [Link](#) | React, Firebase, TailwindCSS, DaisyUI

- Developed a Quran learning platform using React.js and public APIs, featuring Bangla translation, audio playback, and user favorites. Built interactive Salat courses with quizzes, scoring, word tracking, and a real-time leaderboard.

## Certification & Achievements

- Fundamental IT Engineer Examination (ITEE FE Level 2) 2024 National Rank 5th
- RUET Day Innovation Idea Contest 2023 3rd

## Education

**Rajshahi University of Engineering & Technology** Jan 2020 - June 2025  
B.Sc in Computer Science & Engineering | CGPA: 3.33 / 4.00

## Research & Publication

**Conference Paper** | Computer Vision | Deep Learning | Multimodal AI NCIM 2025  
**A Lightweight Framework for Facial Emotion Recognition: Leveraging Geometrical Priors with Spatial Features**

- Developed a multimodal deep learning model for facial expression recognition, improving accuracy on challenging emotions like anger vs. disgust with up to 94% accuracy across datasets.

**Undergraduate Thesis** | Machine Learning | Cyber Security | Explainable AI

**Optimizing Intrusion Detection in Banking Networks Using Machine Learning and SHAP Explanations**

- Built machine learning models for anomaly detection in banking datasets and implemented SHAP-based Explainable AI techniques to enhance transparency and interpretability in threat detection.