MD. ABU HORAIRA TONMOY

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EDUCATION

University of Dhaka   Dhaka, Bangladesh
Bachelor of Science in Computer Science & Engineering   *Jan 2021 – Dec 2026 (Expected)*
CGPA: 3.83/4.00 (till 3rd year, 1st semester) | **Expected Graduation:** December 2026

TECHNICAL SKILLS

Programming Languages: C, C++, Python, Java, JavaScript, Dart
Web Technologies: HTML, CSS, React.js, Node.js, Express.js, Flask
Databases: MongoDB, MySQL, Oracle SQL, Firebase
Tools & Technologies: Git, GitHub, Linux, Docker, Android Studio
Additional: Hardware & Embedded Systems, Microcontrollers, Circuit Design, PCB Design

PROJECTS

TravelHeaven – AI-Powered Travel Planning Platform

⌂ github.com/puHoraira/TravelHeaven

- Developed a comprehensive MERN stack travel platform with 15+ features
- Integrated Google Gemini AI for smart travel recommendations
- Implemented real-time collaborative itinerary editing with live chat system
- Utilized 9 design patterns (Singleton, Strategy, Repository, Observer, Factory, Decorator, Chain of Responsibility, Builder, Facade) showcasing advanced software engineering
- Integrated Bangladesh Railway API for seamless booking experience
- **Technologies:** React, Node.js, MongoDB, Express, Google Gemini AI, WebSocket

Rescue_Track – Disaster Relief Management System

⌂ github.com/puHoraira/Rescue_Track

- Built full-featured disaster management platform with 5 user roles (Admin, Camp Officer, Medical Officer, Leader, Volunteer)
- Developed comprehensive camp management and inventory optimization with auto-replenishment
- Implemented supply chain tracking and volunteer coordination systems
- Integrated SSLCommerz for secure donation processing and Nodemailer for notifications
- Created transparent financial dashboards and medical report generation features
- **Technologies:** React, Node.js, MongoDB, Express, SSLCommerz

LearnSphere – Cross-Platform EdTech Mobile Application

 github.com/puHoraira/edtech

- Developed cross-platform mobile learning application for Android and iOS
- Implemented online courses, video lectures, assignments, and quizzes system
- Integrated Firebase Authentication and Cloud Firestore for real-time data management
- Built course enrollment system with progress tracking and user profiles
- **Technologies:** Flutter, Dart, Firebase, Cloud Firestore, Android/iOS

Hospital Management System – Enterprise Healthcare Solution

 github.com/puHoraira/hospitalManagement

- Designed comprehensive hospital management system with Node.js backend and Oracle SQL database
- Developed patient registration, appointment scheduling, and medical history tracking modules
- Implemented RESTful API architecture with file uploads using Multer
- Created administrative dashboards for complete hospital operations management
- **Technologies:** Node.js, Express, Oracle SQL, REST API, Multer

CSEDU Bank Management – Desktop Banking Application

 github.com/horaira1015/CSEDU_BANK_MANAGMENT_SYSTEM

- Built professional desktop banking system with JavaFX GUI and MySQL database
- Implemented user authentication and account management (Savings, Current, Fixed Deposit)
- Developed transaction processing features (Deposit, Withdraw, Transfer)
- Created loan management system and comprehensive transaction history tracking
- **Technologies:** Java, JavaFX, MySQL, CSS

DualGame: Chess + Tic-Tac-Toe – C++ Game Development with AI

 github.com/puHoraira/DualGameProject-CHESS-TICTACTOE-

- Developed dual-game desktop application from scratch using C++ and SDL2 graphics library
- Implemented fully functional Chess and Tic-Tac-Toe games with AI opponents
- Created custom graphics, animations, and sound effects using SDL2_mixer
- Integrated TTF font rendering and menu system for seamless game switching
- **Technologies:** C++, SDL2, AI Algorithms, Game Development

ADC Hardware Project – Analog to Digital Converter

 github.com/horaira1015/ADC_EEE-project

- Designed and implemented Analog to Digital Converter circuit
- Conducted complete hardware implementation and functionality testing
- Created comprehensive technical documentation including project report and presentation
- **Technologies:** Electronics, Circuit Design, Hardware Implementation

ADDITIONAL INFORMATION

Interests: Software Engineering, Full-Stack Development, Mobile App Development, AI/ML, Hardware Design

Languages: Bengali (Native), English (Fluent)

GitHub: github.com/puHoraira | github.com/horaira1015

Portfolio: puhoraira.github.io/portfolio