

TAWHIDUL HASAN

Software Developer | Computer Science & Engineering Undergraduate

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[Portfolio](#) • [GitHub](#) • [LinkedIn](#)

PROFESSIONAL SUMMARY

Computer Science and Engineering undergraduate at KUET with a strong foundation in algorithms, data structures, database systems, and full-stack development. Codeforces Specialist (peak rating 1429) with 1000+ problems solved and three inter-university IUPC finals, plus winner and runner-up placements in two innovation competitions. Experienced in delivering end-to-end web, mobile, and embedded systems in C++, Java, Python, PHP/Laravel, and the JavaScript/TypeScript ecosystem. Seeking a software engineering internship or entry-level role building reliable, scalable products.

EDUCATION

Khulna University of Engineering & Technology (KUET)

Jan 2023 Present

B.Sc. in Engineering, Computer Science and Engineering - CGPA: 3.72 / 4.00

- Coursework: Data Structures, Algorithms, OOP, Database Systems, Compiler Design, Software Engineering, Numerical Methods, Machine Learning.

Saint Joseph Higher Secondary School, Dhaka

Jul 2019 – Dec 2021

Higher Secondary School Certificate (HSC), Science

Mirpur Cantonment Public School & College, Dhaka

2019

Secondary School Certificate (SSC), Science

TECHNICAL SKILLS

Languages: C, C++, Java, Python, JavaScript, TypeScript, PHP, C#, Dart, SQL

Frontend: React.js, Next.js, Astro, Preact.js, Tailwind CSS, HTML5, CSS3

Backend: Node.js, Express.js, Laravel, Spring Boot, Django

Databases: MySQL, Oracle, MongoDB, Firebase, Microsoft SQL Server

Mobile & Embedded: Android (Java), React Native, Arduino / sensor integration

Tools & Platforms: Git, GitHub, GitLab, Netlify, Vercel, Anaconda, MS Excel / Google Sheets

Design: Figma, Adobe Photoshop, Illustrator, After Effects, Lightroom, Canva

Concepts: Data Structures & Algorithms, OOP, DBMS, Compiler Design, System Design, Machine Learning

PROJECTS

AgriSense AI: Autonomous Agentic Advisory System

Python, FastAPI, LangGraph, PostgreSQL

- Two-agent system for smallholder farmers: a conversation agent that builds a costed season plan, and a monitor agent that runs on a schedule to re-check live forecasts and adjust committed plans automatically.
- Grounded all outputs in real data sources, live weather API, RAG knowledge base, crop disease detection, and market price data.

SignOLight: AI Sign Language Video Player

React, Express.js, Three.js

- Built a tool that plays YouTube videos beside a real-time 3D sign language avatar synced to captions.
- Used Gemma 4 to convert captions into sign notation and simplify language, with Bangla-English support.

WhatsApp Thread Summarizer: AI Productivity Platform

React, TypeScript, Node.js, Supabase

- Mobile-first retail assistant for small general stores in Bangladesh, digitizing inventory, sales, customer credit, and bookkeeping.
- Built Bengali voice input, offline synchronization, and AI-generated business insights for low-connectivity environments.

SlideCommander: Offline Voice & Mobile Presentation Remote

Python, WebSockets, Faster-Whisper

- Built a tool that turns any smartphone into a wireless presentation remote with no app or internet needed.
- Added fully offline voice control supporting multiple spoken commands, including direct slide jumps.

Hisab: Smart Retail Assistant

JavaScript, Firebase

- Mobile-first retail assistant for small general stores in Bangladesh, digitizing inventory, sales, customer credit, and bookkeeping.
- Built Bengali voice input, offline synchronization, and AI-generated business insights for low-connectivity environments.

Murder in KUET: AI Board Game Engine

Python, Three.js, React

- Cluedo-inspired deduction game supporting Human vs Human, Human vs AI, and AI vs AI modes.
- Built explainable AI opponents using Minimax, Monte Carlo Tree Search, Bayesian inference, and A* pathfinding.

Arcane (WizardLang): Programming Language & Compiler	C, Flex & Bison
Designed and implemented a wizard-themed language covering lexical analysis, tokenization, parsing, and syntax-directed translation, applying core compiler construction principles.	
Cinema Paradiso: Film Database Platform	Laravel, PHP, MySQL, JavaScript
Full-stack film and television discovery platform for logging, rating, and discussing titles; implemented authentication, relational schema design, search and filtering, and a responsive Blade interface.	
ParaBounce: Projectile Motion Simulator	Next.js, TypeScript
- Real-time physics simulator visualizing projectile trajectories with and without air resistance, with configurable velocity, angle, mass, gravity, and throw type plotted dynamically. - Awarded Runner-Up at the Bridging Engineering & CS Competition 2025.	
Smart Helmet System: IoT Road-Safety Device	ESP-32, Embedded C
- Team-led embedded system pairing an alcohol detection sensor with relay-based engine control, blocking ignition when the rider is unhelmeted or intoxicated. - Awarded First Place at the HACK Project Showcasing competition.	

ACHIEVEMENTS & COMPETITIONS

Competitive Programming

- Codeforces Specialist:** peak rating 1429 (current 1190); 1000+ problems solved across Codeforces, LeetCode, CodeChef, and AtCoder.
- Finalist: AUST IUPC 2025, KUET IUPC 2025, and NWU IUPC 2025** (Inter-University Programming Contests).
- Finalist, IKPC:** ranked 25th in the Intra-KUET Programming Contest.

Innovation & Project Competitions

- 1st Place: HACK Project Showcasing.** Led the team that designed and built the Smart Helmet System on Arduino Uno, integrating alcohol detection and relay-based engine control to prevent unsafe riding.
- 2nd Place: Bridging Engineering & CS Competition 2025.** Runner-up in an international interdisciplinary innovation competition organised by ILM AI Ltd. and City, St George's, University of London, for ParaBounce.
- 1st Place: CYBERTRON 2025;** Semi-Finalist, BitFest 2025 (university-level esports tournaments).
- Finalist: IUT 12th ICT Fest, BDApps Agentic AI Hackathon.** Reached the top 20 out of 500+ competing teams.

PROFESSIONAL EXPERIENCE

Software Engineer: Logarithm Studio	Mar 2026 – Present
- Contribute to backend development for a software product, building and maintaining API endpoints and core application features. - Collaborate with the team on debugging, testing, and deployment to ensure reliable, production-ready releases..	
Data Analyst & Content Contributor: Fopol Experts	Oct 2022 – Present
Produce weekly data-driven analytical reports, translating large statistical datasets into clear, actionable recommendations; build and maintain performance-tracking spreadsheets and metric models.	
Content Writer & Editor: Goalki	Nov 2022 – Present
Wrote, edited, and published analytical long-form articles and summaries while maintaining editorial quality and consistency across contributors.	
Content Writer & Designer: ArenaHype	May 2021 – Nov 2022
Created written and visual content for digital platforms, combining copywriting with graphic design to increase audience engagement.	

LEADERSHIP & EXTRA-CURRICULAR

Publication Secretary: CYBORG, Cyber Gaming Club of KUET	Mar 2023 – Present
Lead event organization, communications, and execution for campus-wide competitive gaming events, coordinating participants and promotional material.	
Member: Organization of KUET Sports (OKS)	Mar 2023 – Jan 2024
Planned and coordinated university-level events, managing logistics and participant communication.	
Organizing Secretary: Josephite Math Club	Oct 2019 – Sep 2022
Coordinated mathematics competitions and events, managing scheduling, communication, and on-day execution.	

LANGUAGES

English (Professional Working Proficiency) • Bengali (Native)