

Abdullah Al Mahmud

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EDUCATION

- **University of Dhaka** Dhaka, Bangladesh
Bachelor of Science in Computer Science & Engineering; CGPA: 3.87 Jan. 2022 – Present
- **Dhaka College** Dhaka, Bangladesh
HSC in Science; GPA: 5.00 July 2018 – November 2019

SKILLS

- **Languages:** C, C++, Java, Python, JavaScript, TypeScript, SQL
- **Frameworks:** Next.js, React.js, Tailwind CSS, Spring Boot, FastAPI, Capacitor
- **Databases:** MySQL, PostgreSQL, Oracle, SQLite, Firebase, Supabase, Redis
- **Version Control:** Git, GitHub
- **DevOps:** Bash, Docker, GitHub Actions, Nginx
- **Cloud & Platforms:** AWS, Google Cloud, Vercel, Render
- **Testing & Docs:** Postman, Swagger, Pytest
- **AI/ML Tools:** OpenAI SDK, Google Gen AI SDK, LangChain, LangGraph

EXPERIENCE

- **Sirius Academic & Admission Care** Bandar, Narayanganj, Bangladesh
Co-founder, CTO & Instructor Jan 2022 – Present
 - **Academic Leadership:** Teach Physics, Chemistry, and Higher Mathematics at the HSC level while mentoring students to gain admission into top institutions like BUET, DU, and medical colleges.
 - **Operational Management:** Oversee finance, marketing, strategic planning, and staff collaboration within an 11-member team to ensure effective academic delivery.
 - **Technical Stack:** Utilized TypeScript, Python, Next.js, FastAPI, PostgreSQL, and deployed on Vercel and Render to build internal tools for automation and student engagement.
 - **EdTech Innovation:** Led the development of AI-powered tools, including a Payment Collection System using LangChain and LangGraph for intelligent database interaction.
- **Mass Holding Co., Ltd** Tokyo, Japan (Remote)
Intern Software Engineer Jul 2024 – Present
 - **Full-stack Development:** Contributed to the development of a beauty product website using Next.js and Spring Boot; collaborated in a team of three.
 - **Backend Engineering:** Implemented REST APIs, managed MySQL databases, and deployed services on EC2 using Docker.
 - **Feature Implementations:** Built advanced features such as AR product previews, dynamic event ticketing, barcode-enabled offline purchasing, and real-time event streaming.
 - **DevOps & CI/CD:** Handled end-to-end deployment and operational maintenance on AWS EC2.
 - **UI/UX Enhancements:** Ensured responsiveness across devices and implemented scheduled email invitations and QR-based event systems.
 - **Data Analysis & AI:** Developed a product demand prediction model for warehouse-product pairs using historical sales data, with an interactive frontend and backend system to visualize forecasts.

FEATURED PROJECTS

- **FunFuzz – AI-Powered EdTech for Kids** ↗

An interactive learning platform combining AI, AR, and gamified modules to make education fun for children.

- Tech Stack: Next.js, Spring Boot, Redis, MySQL, Tailwind CSS, Docker, OpenAI SDK, Google Gen AI SDK
- Key Features:
 - * Interactive math practice with adjustable difficulty levels, real-time feedback, and performance tracking
 - * Word writing module with difficulty-based word sets, OCR-powered handwriting analysis, and feedback using OpenAI
 - * AI-generated stories with customizable topics, narratives including images, pdf, audio, and video based on user preferences
 - * Augmented Reality (AR) module featuring 3D animal models for immersive educational exploration
 - * Customizable user profiles with progress dashboards and dynamic theme switching for personalized experiences
 - * Admin dashboard for managing users, monitoring progress, and curating educational content

- **Bayanno.ai – AI-Powered Document Management & Translation** ↗

An AI-powered platform that enables users to write in Banglish and receive fluent, context-aware Bangla responses, with support for voice input, real-time collaboration, auto-translation, and AI-enhanced document creation.

- Tech Stack: FastAPI, Next.js, PostgreSQL, Tailwind CSS, OpenAI SDK, Google Gen AI SDK, LangChain
- Key Features:
 - * Secure document management with tagging and smart search for accessing any public documents
 - * Real-time, context-aware translation from Banglish to Bangla and English
 - * AI-assisted document writing with image generation, voice typing, and inline translation
 - * Smart document-aware chat assistant using RAG for contextual responses
 - * Real-time collaboration in documentation writing
 - * AI-generated story visions with video and audio based on text story.
 - * Instant real-time notifications

- **HealTechBD – Online Health Care Platform** ↗

A digital healthcare platform streamlining patient-doctor interactions, diagnostics, pharmacy services, and emergency ambulance coordination across Bangladesh, with AI-powered insights.

- Tech Stack: Spring Boot, Next.js, MySQL, Tailwind CSS, Redis, Docker, AWS EC2/S3, OpenAI SDK
- Key Features:
 - * Virtual doctor consultations via secure video or chat with automated scheduling
 - * Digital prescription generation and management for physicians
 - * Online diagnostic test booking and instant online access to medical reports
 - * Smart medicine ordering system that alerts nearby pharmacies for fastest delivery
 - * Emergency ambulance booking with real-time availability tracking
 - * Automated medication reminders to ensure timely dosage
 - * AI-powered health insights including disease prediction and food calorie analysis

HACKATHON ACHIEVEMENTS

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|--------------------------------|---------------------------|-------------------|
| InnovateX 2025 | 2 nd Runner Up | <i>TryShip</i> |
| Bitfest 2025 | 1 st Runner Up | <i>Bayanno.ai</i> |
| Code Samurai 2024 | 1 st Runner Up | <i>Ecosync</i> |
| SUST CSE Carnival 2024 | Top 10 | <i>PharmaCare</i> |
| LUCC Carnival Chapter 2 | 1 st Runner Up | <i>MediNest</i> |
| Therap JavaFest 2023 | 1 st Runner Up | <i>HealTechBD</i> |