Rayian Bin Shiraz Mahi

Computer science undergraduate and software engineer

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Profile

I build systems that connect software to the physical world: mobile and web platforms, realtime backends, and the firmware on the devices they talk to. I develop software for EV charging infrastructure at ChargeMe, and wrote flight software for a CanSat team that placed 7th in the world. Interests: connected and cyber-physical systems, distributed and realtime systems, embedded software.

Education

B.Sc. in Computer Science and Engineering — United International University, Dhaka — 2023 – 2027 (expected)

- CGPA **3.62 / 4.00** after 99 of 138 credits. Term GPAs of 4.00 and 3.83 in the two most recent trimesters. Merit scholarship recipient.
- Selected coursework: Operating Systems, Computer Networks, Artificial Intelligence, Software Engineering, Theory of Computation, Data Structures and Algorithms, Digital Logic Design, Mobile Application Development.
- Final year design project in machine learning, in progress.

Honors and awards

CanSat Competition 2025, Virginia, USA — Team UIU ASCEND — Jun 2025

- 7th worldwide, 2nd in Asia and 1st in Bangladesh among 34 finalist teams. One of three software team members; developed and integrated the flight software on a Teensy 4.1.

4th place (3rd runner-up), UIU Microprocessor and Microcontroller Project Show — Summer 2026

- Aqua-Sweep, an autonomous surface-cleaning rover built on ESP32.

Experience

Software Engineer, UIU Fellowship — ChargeMe OPC, Dhaka — Sep 2026 – present

- Develop the mobile apps for an EV charging platform and work across its backend, integrating the white-label charging app with an OCPP backend built on CitrineOS.

Founding Full-Stack Engineer — Prologic (formerly Projucti), remote, part-time — 2019 – present

- Build web and mobile products for clients with Vue, Nuxt, React, Flutter, Node.js and Python, from first prototype to production. Designed the company's brand identity.
- Contributed Flutter frontend work to Star Tech's retail app (100K+ downloads on Google Play) and its HR app.

AI Code Evaluator — Outlier AI, remote contract — 2026

- Reviewed AI-generated code for correctness, efficiency and security, and wrote ranked evaluations used to train code-generation models.

Selected projects

CanSat Flight Firmware — open-source reference — C++, Teensy 4.1, PlatformIO

- Five-thread flight software for sensing, GPS, radio, flight states and telemetry, with documented threading rules.

Digital Sheriff of Nottingham — TypeScript, Colyseus, React, Docker

- Server-authoritative multiplayer board game for 3 to 6 players that keeps each hand hidden on the server. Backed by **114 automated tests**.

Storyframe — Next.js, BullMQ, Gemini, Cloudflare R2

- Turns written stories into illustrated, narrated scenes via a background job pipeline with AI provider fallback.

HandyLink — built twice — Nuxt, PHP, MySQL, React Native, Express

- Local services marketplace, built as a web platform for the database course (lead developer) and as a mobile app for the mobile development course. Selected for the UIU Project Show, Feb 2026.

Collabo and **AlgoArena** — WebRTC, Electron, Three.js

- Realtime drawing and video collaboration over WebRTC; and a 2D/3D pathfinding visualizer for 7 algorithms with **258 automated tests**.

Teaching and writing

Instructor, CanSat Seminar — SIC Bangladesh — Jan 2026

- Led a hands-on workshop for students on satellite sensors, telemetry and embedded C++ firmware.

Technical writing — 2025 – present

- Five engineering write-ups at xrayian.is-a.dev on flight software, realtime systems, AI pipelines and firmware.

Skills

Languages	TypeScript, JavaScript, Python, C++, Dart, Java, PHP, SQL
Web and backend	React, Next.js, Vue, Nuxt, Node.js, Express, NestJS, FastAPI, Colyseus, WebRTC
Mobile	Flutter, React Native
Embedded and IoT	Teensy 4.1, ESP32, ESP8266, PlatformIO, MQTT, OCPP
Data and infra	PostgreSQL, MySQL, MongoDB, Redis, BullMQ, Docker, Nginx, Vercel, Azure, Cloudflare R2