

Dhrubojyoti

Software Engineer | Full-Stack Developer

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PROFESSIONAL SUMMARY

Results-driven Computer Science student and Full-Stack Developer with a passion for building scalable, end-to-end systems. Proven ability to architect complex solutions, from multi-tenant Next.js/TypeScript SaaS platforms to low-level Rust and C terminal editors. Adept at full-lifecycle development—including database schema design, secure API architecture, and CI/CD pipelines—while leading IT operations and design initiatives as an Executive for the BRAC University Robotics Club.

EDUCATION

BRAC University Dhaka, Bangladesh
B.Sc. in Computer Science 2024 – Present | Expected 2028
• **Relevant coursework:** Database Systems (CSE370), Artificial Intelligence & Machine Learning (CSE422), Data Structures & Algorithms(CSE220 CSE221).

Notre Dame College — HSC, Science, 2020–2022
Shohagpur Govt. S.K. Pilot Model High School — SSC, Science, 2018–2020

TECHNICAL SKILLS

Languages	TypeScript, JavaScript, Python, Java, C++, C, Rust, SQL
Frontend	React, Next.js (App Router), Tailwind CSS, Framer Motion, Shadcn UI
Backend & Data	Node.js, PostgreSQL, Prisma ORM, Supabase, REST APIs, Authentication & Authorization
Tools & DevOps	Git, GitHub Actions (CI/CD), Docker, Linux, Vercel
Concepts	Data Structures & Algorithms, Systems Programming, Database Design, Multi-Tenant Architecture, Machine Learning
Additional	Static Graphics Design, Technical Documentation

EXPERIENCE

Independent Full-Stack & Systems Developer Remote
Self-Directed & Open Source 2024 – Present

- **Architected and shipped Cutline Business Manager**, a multi-tenant SaaS platform unifying client projects, invoicing, time tracking, and messaging into one workspace (Next.js, TypeScript, PostgreSQL, Prisma).
- **Engineered tenant-scoped authorization guards** across all server actions and replaced hard deletion of financial records with guard logic, closing cross-tenant access paths while preserving a full audit trail.
- **Hardened financial integrity** by extracting invoice and currency logic into pure, unit-tested modules — eliminating rounding and multi-currency aggregation errors before production.
- **Automated a nightly disaster-recovery pipeline** in GitHub Actions (pg_dump → standby restore → AES-256 GPG-encrypted artifact, 90-day retention), cutting the recovery point objective to under 24 hours(Because I wanted it as free)
- **Drove a static-analysis-led refactor** from an 83/100 baseline: added a zero-warning ESLint CI gate, consolidated duplicate formatters into one module, and decomposed the two largest components into testable units.

PROJECTS

Terminal Text Editor 2024 – 2025
Rust, C, POSIX Termios, ANSI Escape Sequences

- Engineered a terminal text editor from scratch in Rust — raw-mode terminal I/O, cursor and viewport management, file open/save, and incremental search — with no TUI framework.
- Re-implemented the core in C to contrast manual memory management against Rust’s ownership model, deepening fluency in pointers, buffers, and terminal control.

Earthquake Management System CSE370 | 2026
SQL, ER Modelling, Normalisation — Database Project Finalist

- Designed a normalised (3NF) schema modelling seismic events, affected regions, relief resources, and responder assignments, with SQL views powering incident reporting;

E-Commerce Delivery Prediction Model CSE422 | 2026
Python, scikit-learn, pandas, NumPy, Matplotlib

- Trained and benchmarked [Logistic Regression / Random Forest / KNN] classifiers to predict on-time delivery across 10K+ orders, using correlation-based feature selection, stratified splits, and confusion-matrix analysis to select a final model at 65% accuracy.

Bookbot & Python AI Agent 2024 – 2025
Python, LLM APIs, CLI Tooling

- Built **Bookbot**, a CLI tool reporting word-count and character-frequency statistics for plain-text books, plus a **Python AI agent** with tool-calling that reads, edits, and runs code in a sandboxed directory from natural-language prompts.

LEADERSHIP & AWARDS

Executive, IT Department — Robotics Club of BRAC University 2025 – Present

- Manage IT operations for a 500+ member club — internal tooling, event registration, and digital assets.
- Lead static graphics design for club promotions — event branding and social campaigns that drive recruitment each semester.
- Perform as a vocalist at *Prototype*, the club’s semestery orientation ceremony for 100+ incoming members.

Award: Database Project Finalist — CSE370 Database Systems, BRAC University (2026).
Competitive Programming: 100+ Codeforces problems solved in Java and C++ (graphs, dynamic programming, greedy).