

Mahfuz Ahmad

Software Engineer

Rajshahi, Bangladesh

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PROFESSIONAL SUMMARY

Software Engineer specializing in building scalable web applications, enterprise management systems, and AI-driven platforms. Proficient across the modern JavaScript/TypeScript ecosystem with expertise in Vue.js/Nuxt 3 and React. Strong background in engineering full-stack solutions utilizing Node.js, Supabase, and SQL databases (PostgreSQL/MySQL) to deliver seamless APIs, multi-tenant architectures, and high-performance UI/UX experiences.

TECHNICAL SKILLS

- **Languages:** JavaScript, TypeScript, Python, C++, Java, SQL
- **Frontend:** Vue.js, Nuxt 3, React.js, Tailwind CSS, Pinia, Mobile-Responsive Design
- **Backend & APIs:** Node.js, Nitro, Supabase, PostgreSQL, MySQL, REST APIs, Firebase
- **AI & Data:** LangChain.js, pgvector (Semantic Search), Neo4j (Knowledge Graphs)
- **Tools & Workflows:** Git, GitHub, VS Code, Vercel, Zod, n8n (Automation)

PROFESSIONAL EXPERIENCE

Rigg Technologies

Junior Software Engineer

Software Engineer Intern

Rajshahi, Bangladesh

Jan 2026 – Present

Oct 2025 – Dec 2025

- Develop and maintain enterprise web applications using the Nuxt 3, Vue.js, and Supabase stack.
- Build multi-tenant systems including POS platforms, fleet management portals, and student management systems.
- Engineer mobile-first, responsive user interfaces across distinct client applications, including the REB Auction portal and a Norway Event App.
- Implement complex frontend business logic, inventory workflows, and strict role-based access control (RBAC).
- Integrate frontend applications seamlessly with backend APIs built using Java Spring Boot and Node.js.
- Collaborated with senior engineers during the internship to debug applications, optimize performance, and document technical workflows.

SELECTED PROJECTS

HomeSchool: AI-Driven Learning Platform

Live Site

Tech Stack: React 19, TypeScript, Supabase, PostgreSQL, Node.js, LangChain.js, Neo4j

- Architected a hyper-personalized e-learning platform utilizing Agentic AI workflows to dynamically generate quizzes and targeted learning materials.
- Engineered a “Tri-Storage” backend leveraging PostgreSQL for relational data, pgvector for vector RAG search, and Neo4j for an interactive curriculum knowledge graph.
- Implemented strict LLM output validation using Zod schemas to ensure frontend UI stability and zero educational hallucinations.
- Built automated user onboarding workflows using n8n and established telemetry pipelines optimized for future data lake scalability.

TechFlix: Corporate ERP & CMS Portal

Live Site

Tech Stack: Nuxt 3, Vue.js, TypeScript, Node.js, MySQL, Tailwind CSS

- Developed a bilingual (English/Bengali) corporate website and internal administration portal with Server-Side Rendering (SSR) for maximum SEO performance.
- Built a comprehensive admin dashboard featuring fine-grained Role-Based Access Control (RBAC), complete CMS capabilities, and detailed activity auditing.

- Integrated dual payment gateways (Stripe and local providers) alongside automated email notification pipelines using Nodemailer.
- Ensured strict security compliance via robust API rate limiting and Isomorphic DOMPurify to prevent XSS vulnerabilities.

Global Knowledge International Training Institute ERP

Live Site

Tech Stack: Nuxt 3, Vue.js, Supabase, Pinia

- Developed a fully mobile-responsive, multi-tenant ERP platform for an international training institute with secure data isolation.
- Built a frictionless guest-to-student course booking workflow and an automated certificate generation system.
- Implemented attendance tracking, a 10-point scale grading system, and analytics modules for administrative management.

SmartPark: IoT-Based Urban Parking Solution

Tech Stack: NodeMCU (ESP8266), C++, Arduino IDE, Firebase, Android

- Configured firmware for ESP8266 microcontrollers and integrated real-time sensor data transmission via Firebase.
- **Publication:** Co-authored a conference paper detailing the system architecture, available on Google Scholar.

EDUCATION

Varendra University

Rajshahi, Bangladesh

B.Sc. in Computer Science and Engineering

Aug 2023 – Present

- **Current CGPA:** 3.82 / 4.00
- **Core Coursework:** Data Structures & Algorithms, Database Management System, Software Engineering, Object-Oriented Design & Patterns, Operating Systems, Computer Networks, Theory of Computation.
- **Upcoming (4th Year):** Machine Learning, Cloud Computing & IoT, Cryptography & Network Security, Parallel Processing.

Madinatul Ulum Kamil Madrasa

Rajshahi, Bangladesh

Higher Secondary Certificate (HSC) – Science

2022

- **GPA:** 5.00 / 5.00

Madinatul Ulum Kamil Madrasa

Rajshahi, Bangladesh

Secondary School Certificate (SSC) – Science

2020

- **GPA:** 5.00 / 5.00

ADDITIONAL INFORMATION

- **Workflows:** Agile methodologies, CI/CD familiarity, strict version control (Git/GitHub).
- **Personal Achievement:** Hafiz-e-Quran.