

MD AKRAM

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Education

KPR Institute of Engineering and Technology

B.E. in Civil Engineering, CGPA: 8.92/10.0

Jul 2022 – Present

Coimbatore, Tamil Nadu

- Pivoted to software development through self-taught skills and placement cell exposure.
- **Relevant Coursework: Data Structures & Algorithms, Object-Oriented Programming, Database Management Systems, Computer Networks, Operating Systems** (Self-studied)

Kathmandu BernHardt Secondary School

Science (Physics, Chemistry, Math), CGPA: 3.65/4.0

Jul 2018 – Aug 2020

Kathmandu, Nepal

Projects

SaarthiAI | Next.js, Assistant UI, Tailwind CSS, Gemini API | [LINK](#)

- Developed a **ChatGPT-like AI chatbot** using **Next.js** and **Assistant UI**, integrated with **Gemini API**.
- Implemented **context management** for persistent conversations and **error handling** for improved user experience.
- Designed a **responsive UI** with **Tailwind CSS** and deployed on **Vercel**.

Huffman Compressor | C++, WebAssembly, HTML, CSS, JavaScript | [LINK](#)

- Designed and implemented a **lossless compression algorithm** using **Huffman Coding** in C++, reducing text size by up to **69%**.
- Compiled C++ to **WebAssembly** with Emscripten, enabling high-performance compression in browser environments.
- Created an **interactive UI** with **JavaScript** that dynamically displays compression statistics and binary representation.
- Applied **priority queues** and **binary trees** to optimize frequency analysis and encoding processes.

AI Agent Chatbot | JavaScript, Express.js, Gemini API, Server-Sent Events

- Built an **AI chatbot** with **Express.js backend**, implementing **function calling** for real-time tool execution.
- Engineered **asynchronous communication** using **Server-Sent Events** for streaming responses to users.
- Implemented **secure API authentication** and robust **error handling** for production reliability.

Experience

Innomatics Research Labs

Full Stack Developer Intern

Jan 2025 – Mar 2025

Hyderabad, Telangana

- Engineered **SwasthScript**, a **MERN-stack** healthcare app, implementing **RESTful APIs** and **JWT authentication**.
- Integrated **payment gateways** (Razorpay, Stripe) with **error handling** and **transaction monitoring**, reducing processing time by **40%**.
- Applied **code reviews** and **unit testing** to maintain code quality, improving app scalability by **25%**.

Kathmandu Metropolitan City Office

e-Governance Tech Intern

Jan 2024 – Feb 2024

Kathmandu, Nepal

- Strengthened **e-BPS portal security** by implementing **AES-256 encryption** and **input sanitization** to prevent SQL injection.
- Developed an **AutoCAD-integrated** permit system using **REST APIs**, slashing approval times by **50%**.

Technical Skills

Languages: C/C++, JavaScript, Python, SQL, HTML, CSS

Frameworks & Technologies: React, Node.js, Express.js, MongoDB, RESTful APIs, JWT, WebAssembly

Developer Tools: Git, GitHub Actions, VS Code, Vercel

CS Fundamentals: Data Structures, Algorithms, Object-Oriented Programming

Certifications & Achievements

- Ranked **2nd** on **GeeksforGeeks** (Institution) with **767 coding score (200+ problems solved)**.
- Completed **GfG 160-Day Problem Solving Challenge** with Summer Workshops ([LINK](#)).
- Earned **Best Idea Award** at **INNOVSENSE'24 Hackathon** for innovative solution design.
- Achieved **Top 10** ranking in GDG on-campus coding competition at JS College of Engineering.
- Solved **225+** problems on **LeetCode**, focusing on algorithms, data structures.