# Aayush Kumar Sharma

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## EDUCATION

- **National Institute of Technology** — Patna, Bihar
  *Bachelor of Technology in Computer Science; CGPA: 8.24* — *Nov 2020 – May 2024*

- **R.J.S. College** — Dighwara, Bihar
  *Intermediate (Class XII), BSEB; Percentage: 80.40%* — *July 2017 – April 2019*

## EXPERIENCE

- **Software Developer** — May 2024 – Present
  *Paiteq Private Limited*
  - Tech Stack: **Node.js**, **NestJS**, **MongoDB**, **MQTT**, **EMQX**, **Redis**, **BullMQ**, **Typesense**.
  - Architected a proximity-based social platform supporting 10,000+ concurrent connections via MQTT/EMQX with real-time bidirectional communication.
  - Implemented a custom timeline aggregator service using Redis caching strategies, reducing feed retrieval latency to 100ms under high load (500+ writes/sec).
  - Designed and deployed a typo-tolerant full-text search solution using Typesense and MongoDB geospatial queries, enabling indexing of millions of records with query latency under 50 ms.
  - Orchestrated resource-intensive background tasks (e.g., video transcoding, notifications) using BullMQ and Redis, processing 1,000+ jobs/minute.
  - Integrated Gorse with a custom weighted scoring algorithm (analyzing recency, engagement, and social graphs) to drive personalized content delivery.
  - Developed an optimized media processing pipeline for images and videos using FFmpeg and Imgproxy, leveraging Cloudflare R2 for efficient storage.
  - Implemented a low-latency system for chat, user presence, and live status updates using MQTT protocols.

- **Software Developer Intern** — Dec 2023 – April 2024
  *Paiteq Private Limited*
  - Contributed to backend development using TypeScript, Node.js, and NestJS, while supporting frontend implementations in React and Redux.
  - Integrated optimized RESTful APIs to streamline client-server communication and enhance data flow efficiency.
  - Formulated high-level architectural schemas and database designs, implementing concurrency handling for reliable system performance.
  - Managed version control workflows via Git/GitHub and assisted in deploying scalable cloud infrastructure on AWS.

## PROJECTS

- **GreenGrocery** — June 2023 – Sep 2023
  *Tools: **React.js**, **Node.js**, **MongoDB**, **Express.js**, **Stripe API***
  - Developed a full-stack e-commerce grocery platform featuring secure user authentication and a dynamic shopping cart.
  - Integrated the Stripe API for seamless payment processing and order management.
  - Leveraged React.js for a responsive frontend interface and Node.js/Express for robust backend logic.

## ACHIEVEMENTS

- Knight on [LEETCODE](#) — Maximum Ratings: 2024
- Specialist on [CODEFORCES](#) — Maximum Ratings: 1471
- 3 Star on [CODECHEF](#) — Maximum Ratings: 1721

## SKILLS

- **Languages:** C/C++, JavaScript, Typescript, SQL, HTML, CSS
- **Frameworks:** NodeJs, NestJs, ExpressJs, ReactJs, PostgreSQL, MongoDB
- **Coursework:** Data Structures and Algorithms, Object Oriented Programming, Database Management System, Operating System, Computer Networks