



VIKASH KUMAR

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EDUCATION

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
B.Tech., ECE	National Institute of Technology, Patna	7.73	[Jan 2026]
Senior Secondary	Bihar School Examination Board	82.2	[April 2022]
Secondary	Central Board of Secondary Education	80.8	[May 2020]

PROJECTS

- 1. Online Coding Judge Platform (LeetCode-style System)** December-2025
Tools: Node.js, Express.js, MongoDB, Mongoose, Judge0 API, REST APIs, Axios, JWT, JavaScript [G]
 - Designed and developed a **scalable backend system for an online coding platform** that allows authenticated users to submit solutions in **C++, Java, and JavaScript**.
 - Implemented **asynchronous batch-based code execution** using the **Judge0 API**, enabling parallel evaluation of user submissions against **hidden test cases**.
 - Built a submission evaluation pipeline** that automatically determines verdicts (**Accepted, Wrong Answer, Runtime Error**) and aggregates runtime and peak memory usage across test cases.
 - Designed MongoDB schemas** to persist submission metadata including execution status, error logs, test case results, and performance metrics.
 - Integrated RESTful APIs** for problem submission, execution tracking, and result retrieval with robust validation and error handling.
 - Followed a modular backend architecture, separating controllers, models, and utility services to improve maintainability and scalability.
 - Currently working on **frontend integration and AI-assisted code analysis features** to enhance user experience and feedback.
- 2. User Management REST API (Express + Prisma)** April-2025
Tools: Express.js, TypeScript, Prisma ORM, bcrypt, Node.js [G]
 - Developed a secure and scalable **RESTful API** for user and todo management using **Express.js** and **Prisma ORM** with PostgreSQL.
 - Implemented **authentication** with hashed passwords using **bcrypt** to ensure data security and user privacy.
 - Designed clean and modular **TypeScript-based architecture**, improving type safety and maintainability.
 - Structured API to support **CRUD operations** for users and todos with error handling and response validation.

SKILLS

- Programming Languages:** C++, Java, TypeScript, JavaScript, HTML5, CSS3
- Technologies:** React.js, Next.js, Express.js, Node.js
- System Design & Architecture:** Low-Level Design (LLD), Object-Oriented Design, RESTful API Design
- Databases & ORM:** MongoDB, MySQL, PostgreSQL, Prisma ORM, Redis
- Core CS Subjects:** OOPs, DBMS, CN, OS
- Tools:** Git, GitHub, Docker, VS Code, MATLAB
- Networking & Real-time Communication:** WebSocket, WebRTC

ACHIEVEMENTS

- [Leetcode](#)
- [CodeForces](#)
- [CodeChef](#)