

Yash Kumar Singh

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EDUCATION

National Institute of Technology Durgapur, India
Bachelors of Technology in Chemical Engineering

Aug 2024 - May 2028
GPA: 7.5/10.0

WORK EXPERIENCE

MezZingo

Backend Developer Intern

Jan 2026 - Present

- Deploying scalable **Cloud Run backend services** using **Python and Flask** for production systems.
- Built **RESTful APIs** for subscription workflows and automated background job processing.
- Optimized **Firestore queries and batch operations**, reducing API latency by $\sim 30\%$.
- Improved backend reliability with structured **error handling** and logging, reducing failures by $\sim 25\%$.

Maity Innovations Pvt. Ltd.

Software Developer Intern (Backend)

Jan 2026

- Collaborated with senior developers on production **e-commerce** backend in agile development cycles.
- Engineered cart and coupon **engine handling 10+ validation rules** and inventory consistency checks.
- Implemented **MongoDB transactions** to ensure atomic coupon redemption, eliminating duplicate usage.
- Developed and tested 20+ **RESTful APIs** and resolved critical auth bugs **reducing 500 errors** by $\sim 40\%$.

Techxica Technology Pvt. Ltd.

Full Stack Developer Intern

Nov 2025 - Jan 2026

- Built product management system managing **40+ products** with admin dashboard and **Razorpay** integration.
- Redesigned company website improving responsiveness and **reducing average page load time** by $\sim 25\%$.
- Resolved **payment gateway** issues ensuring **reliable transactions** and 100% successful **webhook** verification.
- Optimized **database queries** and **API responses**, improving overall application performance by $\sim 20\%$.

PROJECTS

BudgetTracker AI (Full-Stack Application)

Next.js 14 (TypeScript), MongoDB, Clerk Auth, OpenRouter API

Oct 2025
GitHub Repo

- Built **LLM-powered** expense categorization across 6+ categories, **reducing manual entry** by $\sim 90\%$.
- Implemented **secure authentication**, protected APIs, and **type-safe backend endpoints** using Clerk.
- Optimized MongoDB access and delivered **analytics dashboards** (bar/pie) for personalized spending insights.

Expense Splitter App (Real-Time System)

React.js, Node.js, Express.js, MongoDB, Socket.io, JWT

Aug 2025 - Sep 2025
GitHub Repo

- Developed **real-time expense settlement platform** supporting 30+ concurrent groups with $< 100\text{ms}$ latency.
- Built secure REST APIs with **JWT authentication** and implemented flexible expense-splitting logic.
- Optimized client-side routing with **lazy loading**, reducing initial bundle size and load time by $\sim 30\%$.

ACHIEVEMENTS

Problem Solving

Solved **200+ LeetCode problems** across arrays, strings, linked lists, trees, graphs, recursion, and dynamic programming.

LeetCode Consistency

Earned **100+ Days LeetCode Badge** through consistent daily problem solving

Competitive Programming

Achieved **1300+ CodeChef rating** through regular competitive programming practice

Smart India Hackathon

Participated in **Smart India Hackathon 2025**, building disaster response drone dashboard with GPS integration

TECHNICAL SKILLS

- **Programming Languages:** JavaScript (ES6+), TypeScript, C, C++, Python
- **Web Technologies:** React.js, Next.js, Tailwind CSS, Node.js, Express.js, Flask, REST APIs, WebSockets, Socket.io
- **Databases & Authentication:** MongoDB, MySQL, Redis, Firestore, Firebase, JWT, NextAuth.js, Clerk
- **DevOps & Cloud:** Docker, Git, GitHub Actions (CI/CD), Linux, Google Cloud Platform (GCP), Postman, Vercel

RELEVANT COURSEWORK

Core CS: Computer Programming, Data Structures Algorithms, Object Oriented Programming, Database Management Systems, Operating Systems

POSITION OF RESPONSIBILITY

Member, Student Alumni Interaction Cell (SAI Cell), NIT Durgapur:

Feb 2025 - May 2025

Organised Alumination 2025 and coordinated alumni networking sessions, cross-team event planning, and on-site logistics.