Yash Kumar Singh

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WORK EXPERIENCE

MezZingo   Jan 2026 - Present
Backend Developer Intern   Remote (Bengaluru, India)

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

Maity Innovations Pvt. Ltd.   Jan 2026
Software Developer Intern (Backend)   Onsite (Durgapur, India)

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

Techxica Technology Pvt. Ltd.   Nov 2025 - Jan 2026
Full Stack Developer Intern   Remote (Maharashtra, India)

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

PROJECTS

BudgetTracker AI | *Next.js 14(TypeScript), MongoDB, Clerk Auth, OpenRouter API* – GitHub | Live Demo   Oct 2025
- 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.

ExpenseSplitter App | *React.js, Node.js, TypeScript, Express.js, MongoDB, Socket.io* – GitHub | Live Demo   Sep 2025
- Developed **real-time expense settlement platform** supporting 30+ concurrent groups with < 100ms 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 $\sim 30\%$.

LRU Cache Implementation | *C++, STL, Unordered Map, Doubly Linked List* – GitHub   Jun 2025
- Implemented an **LRU (Least Recently Used) cache** supporting **O(1)** average get and put operations.
- Combined **unordered_map** and **doubly linked list** to achieve constant-time key lookup and efficient node updates.
- Designed cache eviction logic simulating real-world **memory management systems** and replacement policies.

TECHNICAL SKILLS

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

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

EDUCATION

National Institute of Technology Durgapur, India   Aug 2024 - May 2028
Bachelors of Technology in Chemical Engineering   CGPA: 7.5/10.0

RELEVANT COURSEWORK

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

POSITION OF RESPONSIBILITY

Student Alumni Interaction Cell (SAI Cell), NIT Durgapur   Feb 2025 - May 2025
Member

- Organised **Alumination 2025** and coordinated alumni networking sessions, cross-team planning, and on-site logistics.
- Guided **500+ students** during alumni sessions, ensuring structured coordination and effective overall engagement.