

UTTKARSH TYAGI

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Backend-focused developer building scalable server-side architectures, RESTful APIs, and real-time services. Experienced in authentication, database modeling, and cloud deployment. Recent IT graduate delivering production-ready backend systems.

EDUCATION

UTTARAKHAND TECHNICAL UNIVERSITY, DEHRADUN

Sep 2021 - July 2025

B.Tech in Information Technology | CGPA: 6.5

DELHI PUBLIC SCHOOL RANIPUR, HARIDWAR

Class 12 | 88.4% Class 10 | 86%

SKILLS

Core Technologies: JavaScript, TypeScript, Node.js, Express.js, React, PostgreSQL, MongoDB, Prisma ORM, SQL

Backend Skills: REST APIs, WebSockets (Socket.io), JWT Auth, Google OAuth, RBAC, Caching, Database & Query Optimization

Tools & Deployment: Git/GitHub, Postman, Render, Vercel, HTML5, CSS3, Tailwind CSS

PROJECTS

Teamboard [Github](#) [Live Link](#)

Technologies: Node.js, TypeScript, React, PostgreSQL, Socket.io, Prisma

- Built a real-time messaging platform with optimistic UI updates and WebSocket communication using Socket.io, achieving <100ms perceived latency with automatic reconnection handling
- Implemented multi-layer caching strategy (IndexedDB + in-memory) with TTL-based invalidation, reducing API calls by ~60% and enabling instant UI updates with background data refresh
- Designed anonymous messaging system with role-based visibility where members see "Anonymous" while admins see actual senders, implementing dual-layer filtering (client-side UX + server-side security)
- Optimized React performance using React.memo on 6 components, 30+ useCallback handlers, and Intersection Observer API for intelligent prefetching, reducing unnecessary re-renders by ~70%
- Implemented database optimizations (8 strategic indexes, DB-level filtering, cursor-based pagination, connection pooling) and bulk operations using Prisma transactions, achieving <100ms query times and ensuring data integrity with real-time socket synchronization

PDFdigest [Github](#) [Live Link](#)

Technologies: Next.js (React), FastAPI, Groq Llama 3, ChromaDB, pdfplumber, Tailwind CSS

- Built an end-to-end PDF → Q&A system with FastAPI + Next.js 13 and 4 backend services (parsing, chunking, embeddings, vector search).
- Implemented semantic PDF chunking (~800 chars) with ChromaDB to retrieve top-5 context chunks for grounded LLM answers.
- Integrated Groq Llama 3 (8B / 70B) with per-request model switching, auto-summary on upload, and a typewriter chat UI.

EXPERIENCE

Full Stack Developer Intern [Certificate](#)

July 2025 – Oct 2025

Unlock Discounts, Bangalore (Remote)

- Built a customer review section using React, JavaScript, and CSS to enhance UI responsiveness.
- Developed APIs to fetch and display data from the company's database across platforms.
- Created a certificate verification system with unique codes for intern authentication.
- Attended team meetings to observe and learn startup management and leadership practices.

Project Intern [Certificate](#)

July 2025 – Aug 2025

BHEL, Haridwar

- Observed workflows within a large government tech department.
- Spoke with team members to understand how the tech department works and how systems are managed in practice.
- Developed a web portal for managing electronic equipment issuance with late tracking and recipient records.
- Used HTML, CSS, and React to build a user-friendly interface, and implemented SQL for backend data handling.