

Yash Agarwal

Full-Stack Software Engineer

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EDUCATION

Graphic Era Hill University

B.Tech. in Computer Science & Engineering; Honors in ML & AI

Uttarakhand, India

Aug 2023 – July 2027

EXPERIENCE

Full-Stack Web Developer Intern

Arterns Technologies Private Limited

May 2025 – July 2025

Dehradun, Uttarakhand

- Developed backend infrastructure for Applicant Tracking System with automated resume parsing. Designed RESTful APIs and implemented Firebase database architecture with secure authentication using Node.js.
- Engineered real-time communication system using Socket.io integrated with Firebase, enabling data synchronization across distributed clients with support for multiple concurrent connections.
- Implemented internationalization across 8+ pages in Next.js, managing content delivery and locale-specific routing for corporate wellness platform.

PROJECTS

Daily Ledger - Smart Collection Tracker | React, Firebase, Vite, Tailwind

Oct 2025 – Present

- Built production PWA for real-time collection management with collaborative list sharing and offline support. Implemented Firestore security rules with owner-based access control and server-side timestamp validation.
- Architected real-time collaboration system enabling users to share lists with granular permissions and instant synchronization. Designed map-based data structure supporting efficient permission checks for concurrent multi-user editing.
- Deployed on Vercel achieving 90+ Lighthouse score with 208 KB gzipped bundle. Engineered analytics dashboard with payment tracking and Excel export functionality.

Final Year Project Management Portal | Next.js, Firebase, Node.js, Tailwind

July 2025 – Present

- Architected scalable backend supporting 1,500+ concurrent users for university-wide project management. Implemented complex data modeling for 400+ teams with multi-phase workflow tracking and evaluation criteria.
- Engineered role-based access control with five permission levels. Integrated Firebase Authentication with custom claims and optimized schemas achieving sub-200ms API response times.
- Deployed production system with automated email notifications and real-time synchronization. Scaling to 3,000+ users across multiple campuses starting 2026.

Interactive 3D Resume Builder | React, Three.js, MongoDB, Spring Boot

Feb 2025 – May 2025

- Developed RESTful backend services using Spring Boot with MongoDB integration. Implemented JWT authentication, session management, and auto-save functionality with optimistic locking for concurrent editing.
- Architected WebSocket infrastructure enabling real-time collaboration with conflict resolution and operational transformation, supporting synchronized multi-user editing with sub-second latency.
- Optimized 3D rendering through efficient geometry batching, achieving 60 FPS on mid-range devices while maintaining accessibility features.

TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Python, Java, C++, SQL

Backend & Frameworks: Node.js, Spring Boot, Flask, Express.js, RESTful APIs

Frontend: React, Next.js, Three.js, Tailwind CSS

Databases: Firebase Firestore, MongoDB, PostgreSQL, Redis

DevOps & Tools: Git, Docker, Vite, Vercel, WebSockets, Socket.io, PWA

SOFT SKILLS

Problem-Solving, Cross-Functional Collaboration, Agile Development, Technical Communication