Ayush Bhatia

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Skills

Languages: C++, C, JavaScript, TypeScript
Frontend: React.js, Next.js, Tailwind CSS, Bootstrap, WebRTC
Backend: Node.js, Express.js, REST APIs, WebSockets, Socket.IO, JWT, OAuth
Databases: MongoDB, PostgreSQL, SQL, Redis, Firebase/Firestore
Cloud & DevOps: AWS (EC2, ECS, Fargate, EFS, ECR), Docker, CI/CD, Linux
Tools & Concepts: Git, GitHub, Postman, BullMQ, FFmpeg, Stripe, DSA, OOP, DBMS, Computer Networks

Experience

SwiftCause | Software Development Intern | Link Nov'25 – Mar'26

- Led a team to build a full-stack fundraising platform using **React.js, Node.js, Firebase, and Firestore**, supporting **500+ concurrent users**.
- Architected a scalable Feature-Sliced Design structure and developed **REST APIs** with **RBAC and JWT authentication**, supporting **200+ simultaneous interactions**.
- Integrated Stripe with webhook-based events, UK Gift Aid workflows, and managed email workflows via SendGrid.
- Built real-time analytics dashboards and streamlined compliance reporting with Puppeteer, reducing manual effort by **80%**.

Projects

Stream Talk *(React.js, Node.js, MongoDB, WebRTC, Socket.IO, AWS EC2)* GitHub | Link Nov'25 – Jun'26

- Built a **full-stack video conferencing platform** using **React.js, Node.js, Express.js, Socket.IO,** and **Stream.io SDK**, implementing **WebSocket signaling**, **Auth0 JWT authentication**, **room-based session management**, and seamless **2-second reconnection recovery**.
- Engineered a **chunked recording pipeline** with **MediaRecorder API**, **IndexedDB (Dexie)**, and **Cloudinary**, using **60-second segments**, **three-tier progress persistence**, **concurrent upload throttling**, and **BullMQ + Redis** job queues for asynchronous **FFmpeg** video merging on an **EC2** worker.
- Designed a **secure backend** with **MongoDB Atlas** and **Redis**, featuring **multi-tier rate limiting**, **socket connection throttling**, **express-validator** input validation, **scheduled meeting CRUD**, and graceful degradation when **Redis** is unavailable.

Cloud IDE *(Next.js, TypeScript, Node.js, MongoDB, Docker, AWS Fargate)* GitHub | Link Oct'25 – Feb'26

- Created a **cloud-based IDE** using **AWS ECS Fargate**, **Docker**, and **EFS**, supporting **330+ concurrent users** through isolated containerized workspaces with persistent storage.
- Optimized the **Node.js/Express.js** backend to sustain **700+ API requests/minute** with an average response time of **40 ms** (down from **200+ ms**) through caching and query optimization.
- Secured the **multi-tenant backend** using **JWT authentication, CSRF protection, and input validation**, and validated security controls through an automated **security testing suite**.

Training

Data Structures and Algorithms | Cipher Schools | Certificate | Jul'25

- Covered arrays, linked lists, stacks, queues, trees, recursion, sorting, and searching.
- Practiced time and space complexity optimization.
- Strengthened DSA concepts through problem-solving and solved 200+ questions across multiple topics.

Certificates

Cloud Computing | NPTEL Oct'25
Computer Networking Coursera Dec'24

Education

Lovely Professional University Phagwara, Punjab
B.Tech – Computer Science and Engineering Aug'23 – Present
CGPA: 8.92

Manav Public School Amritsar, Punjab
Intermediate (68.5%) Apr'22 – Mar'23
Matriculation (95%) Apr'19 – Mar'20