Ayush Chamola

Dehradun, Uttarakhand, 248002

📞 +91-7906168090   ✉ ayushchamola8433@gmail.com   in ayush-chamola   ○ github.com/ayush3329

Education

Graphic Era Hill University   **Oct 2021**
Bachelor of Technology in Computer Science and Engineering, SGPA - 8.00   *Dehradun, Uttarakhand*

Projects/Work Experience

AssetNexus | *React js, Vite, Tailwind css, Mongo DB, Express js, Cloudinary*
* Designed and developed a full stack Digital Asset Management (DAM) application for organisations structured for efficient organization, storage, and management of digital assets.
* Created robust backend APIs using Express.js resulting in a 40% reduction in response time.
* Utilized Cloudinary for cloud storage and MongoDB for NoSQL database, reducing storage costs by 50% and enhancing scalability.
* Used React.js, Tailwind CSS and Framer Motion to craft a modern looking responsive frontend.

Multi-Threaded Proxy Server | *C, HTTP Parsing, Distributed Computing, LRU Cache.*
* Concurrent Request Handling: Implemented a multi-threaded proxy server using semaphores and pthreads, improving request handling efficiency by 40% and reducing average response time of information retrieval by 30%.
* Caching for Performance: Incorporated an LRU caching mechanism, resulting in a 50% reduction in server load and a 35% increase in processing speed for cached content, enhancing user experience and resource utilization.
* Flexible Deployment: Designed the proxy server to operate with or without cache, allowing for performance comparisons. Enabling cache improved data retrieval times by 45%, demonstrating significant performance benefits.

AI Guardian | *— NextJS, Redis Pub-Sub, Redis Queue, Python,, NLP*
* Addressed the critical need for building trust in AI by ensuring ethical and safe adoption within organizations, mitigating potential risks and ensuring compliance with organizational policies.
* Engineered a robust communication infrastructure utilizing Redis Pub/Sub, enabling efficient and reliable message broadcasting for real-time threat analysis and response
* Implemented asynchronous messaging patterns with Redis message queues to handle high throughput data streams, ensuring seamless integration between ML algorithms and backend services

Instagram Clone | *Nextjs, WebSocket, Redis Pub Sub, Algorithms*
* Developed a Next.js-based Instagram web clone with real-time messaging using WebSocket and Redis Pub/Sub.
* Implemented WebSocket for instant communication between users, enabling real-time updates of posts and notifications.

* Integrated Redis Pub/Sub for efficient message passing, enhancing the scalability and responsiveness of the application.

Technical Skills

Languages: **C++**, **Javascript**, **TypeScript**,**Java**,**SQL**

Technologies/Frameworks: ReactJS, NextJS, ExpressJS, Tailwind, MongoDB, Node JS, Git, Github, PostgreSQL, WebSockets, webRTC, Redis PubSub, Redis Queue, Redis Cache, Docker, WSL, AWS EC2

Course Work: Data Structures and Algorithms, Object Oriented Programming,Cyber Security, Devops, Computer Networks, Database Management System.

Achievements

Finalist of U-Hackathon 4.0-Meta (team lead) | *Aug 2023 - Sep 2023*
* Championed an innovative strategy to revamp online learning experience, securing top 25 spot among 300 competing teams nationwide; architect and launched a full-stack Learning Management System (LMS) web app that revolutionized education delivery.

Runner Up at Innohack 3.0 | *Mar 2024 - Apr 2024*
* Championed an innovative strategy to revamp Supply chain management experience, securing top 25 spot among 300 competing teams nationwide; architect and launched a SCM web app that revolutionized Product delivery.