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Summary

Results-driven Full Stack Developer with expertise in building scalable web applications, backend systems, and cloud deployments. Proficient in frontend frameworks, API integration, and database management. Strong foundation in DevOps practices with hands-on experience in containerization and CI/CD pipelines.

Projects

Distributed Appointment & Queue Management System GitHub

Tech: Django, PostgreSQL, Redis, Docker, AWS, Nginx

- Designed a high-concurrency appointment booking system handling 20 daily active users with peak 150–180 req/sec, preventing double-booking under race conditions via DB-level locking and idempotent APIs.
- Reduced read latency from 220ms to ¡60ms using Redis read-through caching with explicit invalidation; system gracefully falls back to DB reads on cache failure using circuit-breaker logic.
- Implemented a FIFO doctor queue using Redis sorted sets, guaranteeing correctness under retries, partial failures, and concurrent updates.
- Identified and eliminated N+1 query bottlenecks, reducing database load by 30–35% through query refactoring and indexing.
- Deployed containerized services behind Nginx with rate limiting and health checks; chose DB-backed locking over distributed locks to simplify consistency guarantees.

Real-Time Public Transport Tracking Platform GitHub

Tech: Django, Django REST Channels, WebSockets, PostgreSQL, Redis, Docker

- Built a real-time vehicle tracking system supporting 8k concurrent WebSocket connections with sub-200ms end-to-end update latency under normal load.
- Designed an event-driven pipeline where location updates are streamed to clients via WebSockets and persisted asynchronously, reducing write amplification on the primary database.
- Implemented message ordering and deduplication to handle retries and out-of-order events caused by network instability.
- Used Redis for ephemeral state and fan-out, PostgreSQL for durable storage, explicitly trading strong consistency for lower latency in live views.
- Controlled backpressure during traffic spikes by rate-limiting subscriptions and batching updates, reducing bandwidth usage by 40% via delta-based payloads.

Education

2024 – Present Bachelor's in Computer Science, **Gandhinagar Institute of Technology** GPA: 9.5

2024 – 2025 Micro-Credit Program in CSE, **Indian Institute of Technology, Guwahati** GPA: 9.8

Skills

Programming: C, C++, Python, JavaScript (ES6+), TypeScript.

Frontend: React.js, Next.js, Vite, HTML5, CSS3, TailwindCSS.

Backend & APIs: Django/Django REST Framework, Node.js, Express.js.

Databases: PostgreSQL, Redis, MongoDB, MySQL.

Cloud & DevOps: Docker, Kubernetes, AWS, GitHub Actions, Git, Nginx.

Achievements

- **3x Hackathon Winner:** Secured 2nd Runner-Up at Smart India Hackathon 2025; Winner at NASA Space Hackathon × Nirma University (36-hour); Winner at Masai School × IIT Guwahati (48-hour).
- **Open-Source Contributor:** Active contributor to prominent open-source projects including n8n and Cal.com, fixing major issues and contributing to core functionality improvements.