

# Anirudh Chandan

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## EDUCATION

### GRAPHIC ERA UNIVERSITY

B.Tech. in Computer Science and Engineering; CGPA: 9.11

Dehradun, India

Jan 2020 – July 2024

## EXPERIENCE

### DOCPLIX

Software Engineer

Remote

Nov 2025 – Present

- Architected **30+** Node.js/Sequelize REST APIs for EHR, ensuring **99.9% consistency** during v1-to-v2 migration.
- Reduced record retrieval latency by **40%** through **advanced Sequelize indexing** and SQL optimizations.
- Engineered a **React Analytics Dashboard** with dynamic charts to visualize real-time clinic performance.
- Boosted clinician efficiency by **25%** by refactoring **Appointment Management** into dual-view architecture.
- Resolved **inventory mismatches** by building a **centralized synchronization service**, eliminating data drift.

### GENPACT

Software Engineer (*Promoted from Intern*)

Bengaluru, India

Feb 2024 – Oct 2025

- Boosted tax processing efficiency by **35%** via **serverless Python data pipelines** on **GCP Cloud Functions**.
- Slashed API response times by **40%** through high-throughput **Kafka** and **Redis caching patterns**.
- Managed asynchronous high-volume file uploads to **GCP Storage** and **AWS S3** for supply chain systems.
- Developed **Flask backend services** for a resource utilization portal, serving **24 frontend modules**.

## PROJECTS

### PYDB: RELATIONAL B-TREE STORAGE ENGINE

GITHUB

*Python, Binary File I/O, Data Structures, ACID Compliance*

Architected a disk-based transactional database engine in **Python**, bypassing OS caching for custom **8KB paged memory management**. Implemented a **dual B-Tree architecture** achieving **0.29ms read latencies**. Engineered an ACID-compliant **Write-Ahead Log (WAL)** ensuring zero data corruption while sustaining **approx. 2,400 writes/sec**.

### NEXUS CHAT: REAL-TIME COMMUNICATION

GITHUB

*Node.js, PostgreSQL, Redis, BullMQ, WebRTC, Socket.io*

Engineered messaging architecture decoupling WebSocket ingestion from DB writes using **BullMQ/Redis**. Implemented a **Write-Behind Caching** strategy for read-receipts, reducing DB write load by **99%**. Architected scalable storage via **Range Partitioning** and **GIN indexes (TSVECTOR)**. Integrated **WebRTC** video streaming.

## TECHNICAL SKILLS

**Languages & Backend:** Python, Node.js, JavaScript, C++, SQL, Express.js, Flask, WebSockets, REST APIs

**Infrastructure & DBs:** PostgreSQL, MongoDB, Redis, Kafka, AWS (EC2, S3), GCP, Docker

**Frontend:** React.js, Tailwind CSS, Zustand, HTML/CSS

## ACHIEVEMENTS

- Solved **450+** problems on **LeetCode**, focusing on backend system design and optimization algorithms.
- Contributed to **open-source Node.js projects** during Hacktoberfest, focusing on core API development.