

Dhairya Adroja

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LinkedIn — GitHub — Portfolio

Summary

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- Backend-focused Computer Science student with expertise in server-side development, API design, and database optimization. Proven experience building scalable backend systems with 99.8% reliability. Passionate about creating robust, high-performance server architectures and microservices.

Skills

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- Backend Technologies:** Node.js, Python Flask, ASP.NET, Express.js, REST APIs, GraphQL, Microservices
 - Programming Languages:** Python, JavaScript, TypeScript, Java, C#, Rust, SQL
 - Databases:** MongoDB, PostgreSQL, MySQL, Redis, Database Design, Query Optimization
 - Server & Infrastructure:** Linux, Docker, Nginx, Load Balancing, Caching, Message Queues
 - API Development:** RESTful Services, WebSocket, Authentication (JWT, OAuth), Rate Limiting
 - Tools & Frameworks:** Git, Docker, CI/CD, Testing Frameworks, Performance Monitoring

Projects

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- Enterprise Chat Application Backend** — Node.js, MongoDB, WebSocket, JWT
GitHub — *Real-time Communication Server*
 - Architected scalable backend API supporting 100+ concurrent users with 99.8% message delivery rate
 - Designed secure authentication system with JWT tokens, session management, and role-based access control
 - Implemented real-time WebSocket communication with connection pooling and automatic reconnection
 - Optimized database queries and implemented caching strategies reducing API response time by 40%
 - Built comprehensive admin APIs with user management, analytics, and automated spam detection
 - CodeTrade - High-Performance Data Processing API** — Python, Flask, PostgreSQL
GitHub — *Financial Data Processing Backend*
 - Developed high-throughput API processing 50,000+ data points with 95% accuracy in pattern detection
 - Implemented efficient data pipeline handling 1000+ files per hour with parallel processing
 - Designed scalable architecture supporting 25+ concurrent API requests with load balancing
 - Optimized database operations using indexing and query optimization, improving performance by 60%
 - Built robust error handling and logging system ensuring 99.9% system reliability
 - Physics Simulation API Backend** — JavaScript, Node.js, WebGL Processing
GitHub — *Real-time Physics Engine Server*
 - Created high-performance physics calculation engine processing 1000+ particles at 60 FPS
 - Implemented efficient collision detection algorithms with spatial optimization achieving 95% accuracy
 - Designed modular API architecture allowing dynamic physics behavior configuration
 - Optimized computational algorithms reducing server processing time by 40%
 - Aarambh - Learning Platform Backend** — Node.js, Express.js, MongoDB, JWT
GitHub — *Final Year Project - Educational API Services*
 - Developing comprehensive REST API for learning management with course, user, and progress endpoints
 - Implementing secure authentication and authorization system with role-based access control
 - Building scalable database architecture with optimized queries supporting 500+ concurrent users
 - Creating real-time notification system and file upload services with automated content validation

Experience

- **Teaching Assistant - Object Oriented Programming (Java)** June 2025 – Dec 2025
Darshan University Rajkot, Gujarat
 - Mentored 50+ students in Java backend development, API design patterns, and database integration
 - Conducted practical sessions on RESTful API development and server-side programming concepts
 - Developed backend coding exercises and project templates improving student understanding by 30%
 - Assisted in grading and code review processes, providing detailed feedback on backend implementations
- **Backend Developer (Personal Projects)** 2023 – Present
Full-Stack Application Development Remote
 - Developed and maintained backend services for multiple applications serving 100+ users
 - Implemented RESTful APIs with comprehensive documentation and automated testing
 - Optimized database performance and implemented caching strategies for improved response times
 - Designed secure authentication systems and implemented proper error handling and logging
- **Open Source Backend Contributor** 2023 – Present
Various Projects GitHub Community
 - Contributed to 5+ open-source backend projects, focusing on API optimization and security improvements
 - Implemented database optimizations and caching solutions across multiple repositories
 - Collaborated with global development teams on backend architecture and best practices

Technical Expertise

- **API Design:** RESTful services, GraphQL, WebSocket real-time communication, API versioning
- **Database Management:** Schema design, query optimization, indexing, data modeling, migrations
- **Performance Optimization:** Caching strategies, load balancing, database tuning, code profiling
- **Security:** Authentication, authorization, input validation, SQL injection prevention, data encryption
- **Testing:** Unit testing, integration testing, API testing, performance testing

Achievements

- * 1st Place Winner - CodeTrade Hackathon: Built scalable backend processing 50K+ data points (July 2025)
- * Multiicon Hackathon Winner - Secured internship opportunity through innovative backend architecture
- * Chess Champion - 1st Place Team Event, Runner-up Individual Competition demonstrating strategic thinking
- * Performance Expert: Achieved 40-60% improvement in API response times across projects
- * Security Focus: Implemented secure authentication systems with zero security vulnerabilities

Education

- **Bachelor of Technology in Computer Science and Engineering** Expected May 2027
Darshan University, Rajkot, Gujarat CGPA: 8.1/10
 - Relevant Coursework: Data Structures, Algorithms, Database Systems, Computer Networks, System Design
- **Diploma in Computer Science and Engineering** May 2023
Kalyan Polytechnic, Jamnagar, Gujarat First Class with Distinction
 - Foundation: Programming Fundamentals, Database Management, Web Technologies, System Analysis

Languages

- **English:** Professional proficiency
- **Hindi:** Native proficiency
- **Gujarati:** Native proficiency