Dhairya Adroja

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LinkedIn — GitHub — Portfolio

Summary

- Software Engineering student with expertise in full-stack development, embedded systems, and AI/ML. Proven track record of building scalable applications with 99.8% reliability, winning hackathons, and contributing to open-source projects. Passionate about creating innovative solutions that solve real-world problems.

Skills

- **Programming Languages:** Python, JavaScript, TypeScript, Java, C#, Rust, C/C++, SQL

- **Web Development:** React, Next.js, Node.js, HTML5, CSS3, RESTful APIs, WebSocket, Express.js

- **Software Engineering:** Object-Oriented Programming, Design Patterns, Data Structures, Algorithms

- **Databases:** MongoDB, PostgreSQL, MySQL, Redis

- **Tools & Technologies:** Git, Docker, Linux, CI/CD, Jest, Webpack, Nginx

- **Frameworks:** Flask, ASP.NET, React Native, Vue.js

Projects

- **Enterprise Chat Application** — Next.js, WebSocket, MongoDB, JWT
  GitHub — *Real-time Communication Platform*

  - Architected scalable real-time chat application supporting 100+ concurrent users with 99.8% message delivery rate
  - Implemented secure JWT authentication system with role-based access control and 256-bit encryption
  - Designed responsive UI/UX with React components, reducing load time by 40% through code splitting
  - Built comprehensive admin dashboard with user management and spam filtering achieving 99.5% accuracy
  - Deployed with automated CI/CD pipeline on Vercel with performance monitoring and error tracking

- **CodeTrade - Financial Analysis Platform** — Python, NumPy, Pandas, Streamlit
  GitHub — *Pattern Recognition System*

  - Developed financial analysis platform processing 50,000+ data points with 95% pattern detection accuracy
  - Built dual-interface architecture supporting 25+ concurrent web users and CLI processing 1000+ files/hour
  - Optimized algorithms using vectorized NumPy operations and intelligent caching, reducing computation time by 60%

  - Implemented robust error handling and data validation ensuring 99.9% system reliability

- **MatterMind - Physics Simulation Engine** — JavaScript, HTML5 Canvas, WebGL
  GitHub — Live Demo

  - Created interactive physics simulation engine handling 1000+ particles with consistent 60 FPS performance
  - Implemented advanced collision detection algorithms with spatial partitioning achieving 95% accuracy
  - Optimized rendering pipeline using requestAnimationFrame and WebGL, improving performance by 40%
  - Designed modular architecture with plugin system for extensible physics behaviors

- **Aarambh - Learning Management Platform** — React, Node.js, MongoDB, Express.js
  GitHub — *Final Year Project - Educational Technology*

  - Developing comprehensive learning platform with course management, progress tracking, and interactive content
  - Implementing responsive web design supporting multiple device types with optimized user experience
  - Building scalable backend architecture with user authentication, role management, and content delivery
  - Integrating real-time features for collaborative learning and instructor-student communication

Experience

- **Teaching Assistant - Object Oriented Programming (Java)** June 2025 – Dec 2025
  Darshan University *Rajkot, Gujarat*

  - Assisted 50+ students in understanding OOP concepts, design patterns, and Java programming fundamentals
  - Conducted lab sessions, code reviews, and debugging workshops improving student performance by 25%
  - Developed supplementary coding exercises and project templates for enhanced learning outcomes
  - Mentored students on software development best practices and industry-standard coding conventions

- **Open Source Contributor** 2023 – Present
  Various Projects *GitHub Community*

  - Contributed 10+ merged pull requests across 5 open-source projects, improving code quality and functionality
  - Collaborated with global development teams using Git workflows and code review processes
  - Fixed critical bugs and implemented new features in JavaScript, Python, and TypeScript codebases

Achievements

- 1st Place - CodeTrade Hackathon (30+ teams, July 2025)

- Multiicon Hackathon Winner: Secured internship through innovative project development

- Chess Champion: 1st Place Team Event, Runner-up Individual Competition

- Open Source: 10+ merged pull requests across 5 projects with 500+ aggregated stars

- Reliability: Achieved 99.8% uptime across deployed applications

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, Software Engineering, Database Systems, Computer Networks

- **Diploma in Computer Science and Engineering** May 2023
  Kalyan Polytechnic, Jamnagar, Gujarat *First Class with Distinction*

  - Foundation: Programming Fundamentals, Web Development, Database Management, System Analysis

Languages

- **English:** Professional proficiency

- **Hindi:** Native proficiency

- **Gujarati:** Native proficiency