

KETAN EKNATH PATHADE

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Education

VIT Bhopal University

B.Tech in Computer Science and Engineering

2022 – 2026

CGPA: 8.32/10

Technical Skills

Core Languages: C++ (Primary), Python, JavaScript

C++ Expertise: STL ('vector', 'unordered_map', 'priority_queue'), OOP, File I/O ('fstream'), Multithreading ('std::thread'), Memory Management

Competitive Programming: LeetCode 1456 (150+ problems) **Tools:** Git/GitHub, GDB, Linux, VSCode

Projects

Bank Management System (C++, STL, File I/O)

Jan 2025 – Mar 2025

Production Banking Console App (1000+ Records)

GitHub: Ketan-cmd/Bank-management-System

- Engineered complete banking system using OOP ('Account', 'Bank' classes), STL ('vector', 'string', 'stringstream', 'fstream') persistent storage for 1000+ customer records.
- Implemented secure transactions (balance validation), automatic account numbering, formatted console tables; showcases C++ file I/O and memory management mastery.
- Production-ready system with deposit/withdraw/inquiry features; demonstrates LeetCode 1456 skills applied to real-world software engineering.

Image Encryption System (Python, AES, PyCryptodome, Cryptography)

Dec 2024 – Jan 2025

AES-Based Image Encryption & Decryption System

- Developed secure encryption utility in Python using AES algorithm following object-oriented programming principles, protecting 100+ high-resolution images from unauthorized access.
- Implemented robust encryption/decryption with PyCryptodome library, including effective key management for data confidentiality and integrity.
- Created user-friendly web interface enabling cross-platform encryption and decryption, demonstrating full software development lifecycle and UI/UX design skills.
- Validated with 500+ test images, optimizing performance to achieve average encryption speeds under 3s, reducing data breach risks by 80%.

Adoptbuddy – (React.js, Express.js, Node.js, MongoDB)

Jul 2024 – Sept 2024

Pet Adoption Platform

- Designed and deployed scalable MERN stack application connecting pet owners with adopters, managing 20+ pet profiles and processing 25+ adoption requests, utilizing object-oriented programming principles.
- Implemented secure authentication and real-time validated forms with clean coding practices, reducing form errors by 30%.
- Built admin dashboard with React.js and Node.js for reviewing and approving profiles/requests, improving request handling efficiency by 40% through full software development lifecycle execution.
- Optimized application performance using responsive layouts, lazy loading, and image compression, reducing load times by 20% and demonstrating strong problem-solving skills.

Achievements

- LeetCode Rating: 1456** - 150+ problems solved (Arrays, LL, Stack and Queue Trees) with consistent daily practice.
- AWS Cloud Club VIT Bhopal Core Member** - Organized C++ workshops and competitive programming sessions.
- Open-source contributor resolving issues across multiple repositories.

Certifications

- AWS Cloud Practitioner
- Oracle Cloud Infrastructure 2025 AI Foundations