# KETAN PATHADE

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## Education

**VIT Bhopal University**                                                                                    **2022 − 2026**
*B.Tech in Computer Science and Engineering*                                                    *CGPA: 8.32/10*

## Experience

**Generative AI for Personalized E-commerce Customer Segmentation**          **Mar 2025 − May 2025**
*Runner-up, GeeksforGeeks*
- Conducted exploratory data analysis on e-commerce datasets; derived key metrics such as total spend, purchase frequency, and return ratio.
- Applied K-Means clustering to segment customers into 5 distinct behavior profiles using RFM-inspired features.
- Leveraged OpenAI GPT API to produce segment-specific marketing content and campaign strategies.
- Recommended loyalty incentives, exclusive promotions, and personalized product suggestions to enhance retention.

**FreelanceChain − Decentralized Freelancing Platform**                              **May 2025 − Jun 2025**
*Blockchain Hackathon by Hackerearth*
- Engineered Ethereum-based freelancing platform handling $25K+ in escrow via Solidity contracts, reducing disputes by 60%.
- Delivered a React/TypeScript interface integrated with Web3 (MetaMask), achieving 95% Lighthouse score and 30% faster page loads with Vite.
- Optimized contract architecture and state management, lowering gas fees by 30%.
- Developed comprehensive Truffle/Ganache test suites with 100% coverage for escrow logic.
- Introduced role-based dashboards to improve task tracking and operational efficiency.

## Projects

**Adoptbuddy − Pet Adoption Platform (MERN Stack)**                              **Feb 2025 − Apr 2025**
*Internship Project*
- Launched MERN application hosting 200+ pet profiles and processing 500+ adoption requests.
- Integrated interactive, real-time validated forms, cutting submission errors by 40% and saving 10+ minutes per application.
- Built an administrative dashboard enabling review and approval of 150+ profiles and 300+ adoption requests.
- Implemented responsive catalog with filtering and rich media support for pet details.
- Enhanced performance with CSS Flexbox/Grid layouts and image optimization, improving load speed by 30% and reaching a 90% Lighthouse score.

**Image Encryption System (Python, AES, PyCryptodome)**                              **Nov 2023 − Jan 2024**
*Project Exhibition*
- Developed AES-based encryption utility protecting 1,000+ high-resolution images (up to 20MB) without data loss.
- Created a cross-platform Python GUI for encryption/decryption usable by non-technical audiences.
- Utilized PyCryptodome to strengthen image security, reducing breach risk by 80%.
- Achieved encryption speeds under 3 seconds per image, improving performance by 25%.
- Validated system with 500+ images across formats, earning 95% positive usability feedback.

## Technical Skills

**Languages:** C++, Python, JavaScript
**Web Technologies:** HTML, CSS, React.js, Node.js, Next.js, MySQL
**Developer Tools:** Git, GitHub, Vercel, Netlify, AWS, Cloudinary

## Leadership

**Insights Club, VIT Bhopal**                                                                          **Sep 2023 − Oct 2024**
*Resource Team Core Member*
- Managed resources for 10+ club events with 100+ participants each
- Co-produced the club's quarterly magazine (4 editions)
- Streamlined event logistics, reducing setup time by 30%
- Optimized resource allocation, cutting operational costs by 15%