

Shital Thigale

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EDUCATION

G.H Rasoni College Of Engineering and Management

Bachelor of Technology (INFORMATION TECHNOLOGY ENGINEERING (IT)) | CGPA: 7.36

Jan 2021 – July 2025

EXPERIENCE

Web developer intern | KalpTaru | Pune

June 2024 – Dec 2024

- Engineered and deployed responsive web applications using React.js and HTML5, enhancing user engagement through interactive features and a mobile-first design approach, ensuring an optimal experience across devices.
- Executed thorough cross-browser testing across major platforms, ensuring seamless functionality and achieving universal compatibility with a consistent design for diverse user bases.
- Collaborated with cross-functional teams to deliver projects on time, adhering to Agile methodologies and ensuring efficient development cycles and continuous improvement.

KEY SKILLS

Technical Skills: python, HTML5, CSS3, JavaScript, C++, React.js, MySQL

Frameworks: React.js

Tools: Visual Studio Code, Git and GitHub, Figma **Coursework:** Data Structure, Algorithms, DBMS

PROJECTS

Xycrypt Encryption Algorithm

- Optimized algorithm performance to process 620 MB/s with only 13 cycles/byte, demonstrating ability to balance security requirements with computational efficiency.
- Designed and implemented a novel 3-layer encryption algorithm achieving superior security metrics (7.99 bits/byte entropy, 50.1% avalanche effect) that outperformed established industry standards.
- Applied advanced mathematics (matrix transformations, elliptic functions) to enhance cryptographic strength while maintaining efficient resource utilization (28% CPU, 48KB memory) .

Anonymous Feedback

- Architected and deployed a secure Next.js application for anonymous messaging and feedback management, implementing NextAuth with custom OTP verification and Zod validation, ensuring 100% data privacy. Developed AI-powered feedback analysis through OpenAI API integration while optimizing MongoDB performance with advanced aggregation pipelines for efficient data processing Built responsive UI components with ShadCN, Tailwind CSS, and React Hook Form, ensuring cross-device compatibility while prioritizing user privacy throughout the application lifecycle.

Publication Published a research paper titled "Xycrypt a Secure and Efficient Three-Layer Symmetric Encryption Algorithm for Modern Communication Systems" 16th International IEEE Conference on ICCNT, 2025.
