Harsh Jha

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EDUCATION

Jaypee Institute of Information Technology — Noida, India
Bachelor of Technology in Computer Science and Engineering — Jul 2024 – Jul 2028

TECHNICAL SKILLS

Languages: Java, JavaScript, C/C++, Python, Rust, C#, TypeScript, HTML/CSS, SQL, Bash
Frameworks: React.js, Next.js, FastAPI, Spring Boot, Express.js, Three.js, WinAPI
Tools & Technologies: Docker, Git, GitHub Actions, Node.js, Linux, MySQL, PostgreSQL, MongoDB, FFmpeg, OpenRouter API

TECHNICAL PROJECTS

Cocoon - Private Journaling App | React, TypeScript, FastAPI, SQLite — Mar 2026
github.com/life2harsh/cocoon

- Built a privacy-focused journaling application with a React frontend, FastAPI backend, SQLite persistence, and Progressive Web App support for a responsive app-like user experience.
- Implemented Google OAuth authentication, reminder and notification workflows, and local-first journaling flows designed around private personal writing.
- Structured the repository to support public source control without exposing private application logic, keeping tracked code public-safe while preserving sensitive local routes outside version control.

wimg - Terminal Media Viewer | Rust, FFmpeg, libsixel — Oct 2025
github.com/life2harsh/wimg

- Developed a high-performance command-line tool for rendering images, videos, and GIFs directly inside the terminal using the sixel graphics protocol with dynamic FPS detection up to 30 FPS.
- Engineered a portable Windows distribution with statically linked dependencies and bundled FFmpeg, eliminating external runtime requirements and allowing standalone execution.
- Implemented graceful interrupt handling, proper resource cleanup, and terminal state restoration to ensure the tool remained stable during interactive use.

RepoBrowser - AI Code Analysis Platform | Next.js, TypeScript, OpenRouter API — Jan 2025
github.com/life2harsh/repobrowser

- Built an AI-powered GitHub repository browser that generated intelligent code annotations and project summaries for public repositories through OpenRouter API integration.
- Developed a caching system and file-filtering pipeline to optimize analysis performance, reduce redundant requests, and keep large-scale codebase inspection practical.
- Implemented automated language detection and batch-processing workflows to improve repository-wide code comprehension and summarization quality.

WiFi AutoLogger | Java, Spring Boot, Swing — Jul 2025
github.com/life2harsh/wifiautologger

- Engineered a desktop WiFi authentication manager with AES-256 encrypted credential storage, multi-account failover support, and intelligent retry logic for unreliable login portals.
- Implemented scheduling, auto-startup functionality, real-time connection monitoring, and system tray integration to make the application run quietly in the background.
- Designed robust error-handling and recovery flows to improve resilience under unstable network conditions and repeated captive portal interruptions.

Vortex - Full-Stack Social Platform | Python, JavaScript, MySQL, Docker — Dec 2025
github.com/life2harsh/vortex

- Developed a full-stack chat and blog platform with a JavaScript frontend, Python backend, and MySQL database for handling user-generated content and realtime interaction.

- Containerized the application using Docker and performed load testing with Locust to validate scalability for 10,000 concurrent users.
- Optimized database design and backend behavior for deployment-oriented reliability, reducing environment inconsistencies and improving performance under load.

RetroBBS Chat System | JavaScript, WebSocket, Python Jul 2025
github.com/life2harsh/osdhack

- Built a real-time retro-themed chat platform with WebSocket communication, voice chat, and multiplayer gameplay, securing First Runner-Up at OSDHACK '25.
- Integrated multiplayer games including Pong, SpaceShooter, and Tank Wars through a JavaScript game engine and Python backend API.
- Implemented realtime synchronization and interactive chat flows across multiple clients while maintaining the distinct retro BBS presentation layer.

ACHIEVEMENTS

- **First Runner-Up, OSDHACK '25** — Recognized among top open-source projects by FOSS United, .xyz, and CodeCrafters.
- **Competitive Programming:** Codeforces rating 1380, demonstrating strong algorithmic problem-solving ability.