Harsh Agarwal

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Profile

Third-year CSE student at JIET with proven track record in full-stack development, IoT automation, and AI integration. Hackathon winner with expertise in C, Python, Java, and modern web technologies. Experienced in API integration, Database Management, and college event anchoring. Combines strong technical skills with effective communication to deliver innovative solutions.

Projects

Literate

An AI-powered, full-stack reading application designed for enhanced comprehension and focus. Enables users to upload books and interact with a smart assistant that answers context-aware questions using a Retrieval-Augmented Generation (RAG) pipeline. Built with Next.js, TypeScript, Google Genkit, and Firebase. Features an intuitive reading interface, integrated note-taking, and robust data persistence with Firestore.

BlogWave

A full stack blogging platform enabling user to create, share, explore diverse content and community engagement. Built with Node.js, Express.js, MySQL, Multer, etc. Provides an intuitive interface for creating and managing blog posts, while ensuring robust user authentication, data security, and seamless integration with modern web technologies.

Youtube SideView

Developed a Chrome extension that improves YouTube user experience by implementing a dual-pane interface with resizable side panels for video descriptions and comments. Implemented real-time synchronization with YouTube page changes, responsive design adaptation across multiple screen sizes. Built dynamic content switching between description and comment tabs using JavaScript, DOM manipulation and Chrome Extension APIs.

Unified AI Tools Hub

I designed a web application integrating an AI Chatbot, Photo Editor, and Text-to-Speech background music. I utilized React, TailwindCSS, Azure Cognitive Services, ImageKit, and MongoDB to deliver a seamless user experience. Through this project, I acquired experience in API integration, web development, and cloud-based solutions.

Telegram Based Home Automation

Developed a home automation system using Telegram as the control interface for remote control of lights, fans, and appliances. Integrated motion-detection for automatic lighting activation, enhancing energy efficiency. Utilized ESP32 microcontrollers and relays for system automation, gaining experience in IoT, automation protocols, and seamless user interaction.

Courses

Data Base Management System, Indian Institute of Technology Kharagpur
Introduction to Programming in C, Indian Institute of Technology Kanpur
Sustainable Engineering Concepts and Life Cycle Analysis, Indian Institute of Technology Kharagpur
Innovation, Business Models and Entrepreneurship, Indian Institute of Technology Roorkee

Achievements & Activities

Regular Event Anchor	— College institutional events and programs
Innovate 2025	— 2nd Place — Hackathon organized by MANIT J, Modi University and Thapar Institute
Hack-ito 2023	— 1st Place — College Ideathon for Smart India Hackathon
Hack-ito 2024	— 2nd Place — College Ideathon for Smart India Hackathon
LaunchPad Challenge 2024	—Top 6 — Startup pitching at iStart Jodhpur

Skills

- **Programming Languages:** (C | Python | Java)
- **Data Structures & Algorithms**
- **Problem Solving**
- **Communication Skills:** (Effective in delivering presentations and contributing to team discussions.)
- **IoT**
- **Web Development**
- **Problem Solving**

Education

B.Tech CSE 3rd Year, Jodhpur Institute of Engineering and Technology	September 2023 – Present Jodhpur, India
Higher Secondary Education, Adarsh Vidya Mandir Shankar Vidya Peeth	June 2021 – March 2023 Mount Abu, India
Secondary Education, St. Mary's High School	March 2013 – March 2021 Mount Abu, India