

# Harsh Agarwal

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## Profile

Driven and meticulous third-year Computer Science Engineering student at Jodhpur Institute of Engineering and Technology, passionate about technological innovation. Enthusiastic about problem-solving, software development, and emerging technologies. Committed to utilizing analytical capabilities and programming knowledge to support creative ideas. Currently developing a solid foundation in software engineering, data structures, and algorithms while cultivating keen interests in web development and artificial intelligence. Eager to transform theoretical understanding into practical, impactful technological solutions that push the boundaries of innovation.

## Projects

### 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

I developed and implemented a home automation system at college using Telegram as the control interface. I enabled remote control of lights, fans, and other appliances via Telegram commands. I integrated a motion-detection feature that automatically activates lights when movement is detected, enhancing energy efficiency and convenience. I utilized microcontrollers ESP32 and relays for system automation, providing a practical solution for smart home management. Through this project, I gained experience in IoT, automation, and communication protocols, ensuring seamless and intuitive 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

## Certificates

**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

**Higher Secondary Education**, Adarsh Vidya Mandir Shankar Vidya Peeth

**Secondary Education**, St. Mary's High School

**September 2023 – Present** Jodhpur, India

**June 2021 – March 2023** Mount Abu, India

**March 2013 – March 2021** Mount Abu, India