

# PRATHMESH DESHKAR

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## SKILLS

**Programming Languages:** Java, HTML, CSS, JavaScript

**Core CS Concepts :** Data Structures, Algorithms, Object-Oriented Programming, Time Complexity

**Tools & IDEs:** Visual Studio Code, Git, GitHub, Kali Linux

**Database & Backend:** MySQL, phpMyAdmin

## EXPERIENCE

### Software Development Research – Java (Independent Project)

Jan 2023 – Dec 2023

- Developed and implemented a custom enhancement of the **AES-192** encryption algorithm in Java.
- Conducted quantitative analysis using **entropy**, **avalanche effect**, and **execution time** to **evaluate security-performance trade-offs**.
- Published results in **IJSRD**, demonstrating applied **research** and **secure software design**.
- Highlighted use of **OOP principles**, **testing**, and **cryptographic evaluation** in backend software workflows.

## PROJECTS

### Text Encryption using Modified AES [GitHub<sup>^</sup>]

Jan 2023 – Dec 2023

- Built a secure encryption tool using a modified AES-192 algorithm proposed in my research paper.
- Integrated cryptographic evaluation metrics to assess performance and security.
- Technologies:** Java, AES, VS Code, Cryptography

### Smart Task Manager (Java Swing) [Github<sup>^</sup>]

May 2025 - Present

- Developing a task management app with task creation, priority-based scheduling, deadlines, and alert notifications.
- Implemented modern GUI using Java Swing and FlatLaf with modular OOP design.
- Technologies:** Java, Swing, FlatLaf, Object-Oriented Design, VS Code

## EDUCATION

### Madhav Institute of Technology and Science

Bachelor of Technology – Information Technology  
CGPA – 7.71 / 10 (till 4th Sem)

Gwalior, Madhya Pradesh

Expected: Jun 2027

### Government Polytechnic College

Diploma in Computer Science  
CGPA – 8.09 / 10

Betul, Madhya Pradesh

Completed: 2024

### Secondary School Certificate (10th)

CGPA – 8.7 / 10

Completed: 2021

## ACHIEVEMENTS

- Published Research Paper** – "Assessing the Impact of Increased MixColumns on AES Encryption Security and Performance" in IJSRD (International Journal of Scientific Research and Development).

## CERTIFICATIONS & TRAININGS

- Software Engineering Virtual Simulation – Walmart (2025)**  
Completed hands-on modules in advanced data structures, software architecture, relational database design, and data munging within a real-world SWE scenario.
- Solutions Architecture Virtual Simulation – AWS (2025)**  
Designed scalable and simple cloud hosting architectures, gaining practical exposure to cloud architecture principles and solution design.
- Ethical Hacking – IIT Jodhpur (2022)**  
Hands-on training in penetration testing, cryptography, and web security using Kali Linux, Metasploit, Nmap, and Burp Suite.