

PRATHMESH DESHKAR

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SKILLS

Programming Languages: Java, HTML, CSS, JavaScript

Core CS Concepts : Data Structures, Algorithms, Object-Oriented Programming, Time & Space 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** between security and performance.
- Published results in **IJSRD**, demonstrating applied **research** and **secure software design**.
- Applied **OOP principles**, **software testing**, and **cryptographic evaluation** in backend workflows.

PROJECTS

Text Encryption using Modified AES [GitHub[^]]

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[^]]

May 2025 - Present

- Building a **modular task manager** with a modern **Java Swing GUI**, **priority-based scheduling**, and **notification alerts**.
- 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

Gwalior, Madhya Pradesh

Bachelor of Technology – Information Technology

Expected: Jun 2027

CGPA – 7.71 / 10 (as of 4th Semester)

Government Polytechnic College

Betul, Madhya Pradesh

Diploma in Computer Science

Completed: 2024

CGPA – 8.09 / 10

Secondary School Certificate (10th)

Completed: 2021

CGPA – 8.7 / 10

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 covering advanced data structures, software architecture, relational databases, and data munging in a real-world SWE simulation.
- **Solutions Architecture Virtual Simulation – AWS (2025)**
Completed hands-on training in penetration testing, cryptography, and web security using tools like Kali Linux, Metasploit, Nmap, and Burp Suite..
- **Ethical Hacking – IIT Jodhpur (2022)**
Hands-on training in penetration testing, cryptography, and web security using Kali Linux, Metasploit, Nmap, and Burp Suite.