



# DEV PATHAK

## B.Tech CSE-Core | VIT Bhopal University

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[Portfolio](#) | [GitHub](#)



## EDUCATION

### VIT Bhopal University

2024 – Present

*B.Tech in Computer Science and Engineering (Core)*

### Colonel Central Academy, Gurugram

Completed

*CBSE Class 12th (Senior Secondary)*

80.2 %

## PROJECTS

### Campus Course & Records Manager (CCRM)

Java SE

- Developed a console-based Java application to manage institute records, including student enrollment, course assignments, and transcript generation.
- Implemented core OOP principles such as Encapsulation, Inheritance (Person to Student/Instructor), and Polymorphism for transcript rendering.
- Engineered a robust file utility system using Java NIO.2 and Streams to import/export data from CSV files and perform recursive backups.
- Integrated advanced features including Design Patterns (Singleton & Builder), custom exception handling for credit limits, and Lambda expressions.
- Built a menu-driven CLI workflow utilizing enhanced switch statements and decision structures for seamless user interaction.

### Personal Portfolio Website

Web Dev

- Developed a responsive personal profile website to showcase academic qualifications, technical skills, and professional identity.
- Integrated interactive elements including a dynamic "Show Qualification" toggle and a custom signature drawing canvas.
- Implemented a contact form with validation for streamlined communication and session appointments.

## Flexible Inventory Management System

Python, SQLite, Tkinter

- A professional, adaptable inventory management system that demonstrates advanced software engineering principles.
- Flexible architecture adapts to different business requirements (Warehouse, Retail, Library, etc.) without code duplication.
- Showcases Clean Architecture, Design Patterns (Configuration, Factory, Observer), and professional practices like virtual environments and testing.

## SKILLS

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**Languages:** Python, Java, C++, C

**Data Structures:** Array, Stack, Queue, Linked List, Strings, Bit Manipulation

**Algorithms:** BFS, DFS, A\*, Dijkstra, Kruskal's, Prim's, Linear/Binary Search, Bubble/Merge/Quick/Heap Sort

**Technical Concepts:** OOP (Inheritance, Abstraction, Polymorphism), Java NIO.2, Stream API, Design Patterns

## ACHIEVEMENTS

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- Successfully maintained a consistent academic record at VIT Bhopal University.
- Developed expertise in complex algorithmic pathfinding, graph traversal, and Minimum Spanning Trees.
- Built a comprehensive Java SE application demonstrating advanced software architecture and data persistence.