

# Abhishek Raj

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## Summary

Final-year ECE undergraduate from NIT Bhopal with strong skills in full-stack web development, data structures & algorithms, and visualization tools. Passionate about building impactful tech products and mentoring peers. Seeking SDE roles to leverage my skills in real-world projects.

## Technical Skills

**Languages:** C++, C, JavaScript, Python

**Web Development:** HTML, CSS, React.js, Node.js, Express.js, Tailwind, REST APIs

**Databases/Cloud:** MongoDB, MySQL, SQL, Firebase

**Tools:** Git, GitHub, Postman, Arduino IDE

**Concepts:** Data Structures, Algorithms, DBMS, OS, CN, OOPs

## Projects

Dec 2024 [Notes App](#) | [GitHub](#)

**Tools/Technologies:** React (Vite), Node.js, Express.js, MongoDB, JWT, Context API

- Developed full-stack notes application with CRUD operations and user authentication
- Implemented secure signup/login using JWT and bcrypt for password hashing
- Created user-specific notes storage with protected routes using React Router
- Added dark/light mode toggle with persistent preference in localStorage
- **Impact:** Served 300+ users with seamless note-taking experience

Oct 2024 [Trackify - PWA Expense Tracker](#) | [GitHub](#)

**Tools/Technologies:** HTML5, CSS3, JavaScript (ES6+), Chart.js, localStorage

- Add, edit, and delete daily expenses with intuitive UI
- Track spending patterns with timestamps and visual analytics using Chart.js
- Implemented offline support via localStorage
- Developed as fully PWA-enabled (manifest + service worker)
- No login required — all data stays local for privacy

Nov 2024 [Pathfinding Visualizer](#) | [GitHub](#)

**Tools/Technologies:** HTML, CSS, JavaScript, A\*, DFS, BFS, Dijkstra Algorithms

- Interactive visualization of pathfinding algorithms with draggable nodes
- Customizable grid with obstacle placement and real-time animation controls
- Displays path length and visited nodes count for algorithm comparison
- **Impact:** Used by 200+ students for algorithm understanding

## Internships / Training

May 2024 – July 2024 [IoT Intern – Yhills](#) | [Remote](#)

- Developed ESP32-based IoT system for environmental monitoring (temperature, humidity)
- Used DHT11 sensors, Arduino IDE (C++), and NodeMCU for data acquisition
- Integrated Firebase for cloud storage and live dashboard updates
- Worked with MQTT protocol and optimized device energy efficiency

## Achievements & Leadership

• **Zenith (Programming Club of MANIT):** Core Member (2023-2025)

- Led a 3-member team to build a visualizer used by 200+ students
- Presented project demos at club meetups and mentored 2 juniors in CP

- Secured admission to Jawahar Navodaya Vidyalaya (JNV)
- Selected for Dakshana Foundation's IIT-JEE/NEET coaching program

## Education

2022-2026 **Maulana Azad National Institute of Technology, Bhopal**

B.Tech in Electronics and Communication Engineering | CGPA: 7.82/10

2022 **Jawahar Navodaya Vidyalaya, Khairabad Sitapur**

CBSE Class XII: 82%

2020 **Jawahar Navodaya Vidyalaya, Khairabad Sitapur**

CBSE Class X: 92.8%

## Soft Skills

Teamwork, Communication, Leadership, Time Management, Problem Solving, Adaptability