

# ABHAY TRIPATHI

B.Tech - Computer Science and Engineering (CSE), Manipal University Jaipur  
Third Year Student (2025 Batch)

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## Skills

- ❖ Java | Python | C# | C | JavaScript | TypeScript | Node.js | React | Express.js | PHP | Linux | Apache | NGINX | MySQL | MongoDB | PostgreSQL
- ❖ HTML | CSS | Bootstrap | jQuery | Flask | FastAPI | MariaDB | Bash | Web Sockets | REST API | CGI | NumPy | TensorFlow | OpenCV | PyTorch
- ❖ Android Development (Java SDK) | Unity | Oculus SDK (VR) | Java Swing | TKinter | PyGame | AWS EC2 | Firebase | MVC | Design Patterns | Git
- ❖ Full-Stack Development | Android Development | VR Development | SQL | SQLite | NoSQL | Cloud Hosting | Cryptography | TCP-IP Networks

## Experience

IT Infrastructure Lead  
and Software Engineer

Youth4Nation Foundation  
(Internship)

May 2023 – Jul 2023  
Delhi (India)

- ❖ Created an online presence of the Organization by designing and implementing the Organization's Tech Stack (E-Mail Hosting, Web Hosting, Payment System, etc.) and developing the [Organization's Website](#), and optimized it for SEO.
- ❖ Designed and developed a Member Enrolment System Software with ID Card Facility which is being used to enrol 1000+ existing Members and all future Members. Developed an Online Payment System using existing solutions.
- ❖ Developed a Member E-Mail OTP Based Authentication and SHA-256 and Salting based Session System. Designed and developed a Secure Authorization based CDN to store digital photos of the Members of the Organization securely.
- ❖ Designed a Stateless Reference Code Generation Algorithm and developed a System to use the same using which Reference Codes can be generated for letters issued by the Organization, which can later verify authenticity of the issued letter, hence providing credibility for the letters issued by the Organization.
- ❖ Technologies Used: LAMP (Linux, Apache, MySQL and PHP) Stack, Bash, HTML, CSS, Vanilla JavaScript, Bootstrap, jQuery. Developed an Automatic Mailing System for sending professional emails using Python.

Full Stack  
Web Developer

Manipal University Jaipur  
(Internship)

Jan 2023 – Mar 2023  
Jaipur, Rajasthan (India)

- ❖ Worked on the development of the HR-Employee Appraisal Web Portal which is being used to conduct the appraisal process of 500+ employees and professors. Made the Web Portal highly secure by patching critical security loop holes.
- ❖ Re-Organized the Tech Stack to make the Web Portal highly fast and more efficient.
- ❖ Technologies Used: HTML, CSS, React.js, Bash, Python (Uvicorn Server), REST APIs (developed using FastAPI), MongoDB.

## Projects

- ❖ FaceTrack: AI Based Facial Attendance Web App used to mark attendance based on facial data of the students. [Link to project](#). (OpenCV, Python, Web Sockets, HTML, CSS, JS, Bootstrap, OpenCV.js). [Jan 2023]
- ❖ TeleOperation: VR App which is made to demonstrate the Proof of Concept of TeleOperation which was ideated by [@akshetpatel](#). TeleOperation is the ability to control mechanical devices virtually using remote technologies. [Link to demo video](#). (Unity Game Engine, Oculus SDK (C#), TCP Connections). [May 2022 – Jun 2022]
- ❖ DigiFriend: App which makes your phone like a smart device. Simply keep talking without pressing any buttons. [Link to download app](#). (Android SDK, TTS Service, AWS EC2, NGINX, Flask, MySQL). [Feb 2021 – Mar 2021]
- ❖ QueueScan: App for starting virtual queues with any QR code, completely anonymously with no registration/KYC. Link: [queuescan.com](#). (Android SDK, HTML, CSS, JS for PWA, Firebase). [May 2020 – Jun 2020]

## Certifications, Achievements and Other Details

- ❖ [Goldman Sachs Virtual Engineering Program](#) | [Object Oriented Programming in Java \(by UC San Diego\)](#) | [Data Structures \(by UC San Diego\)](#).
- ❖ Currently pursuing [Design Patterns](#) Course by University of Alberta via Coursera to enhance my knowledge about various System Designs.
- ❖ **LeetCode**: 50 Days Badge | **HackerRank**: 5★ 30 Days of Code Badge, 4★ Problem Solving Badge, 3★ Java. **LeetCode Profile** (@abhaytr): <https://leetcode.com/abhaytr>, **HackerRank Profile** (@abhaytr): <https://www.hackerrank.com/abhaytr>
- ❖ Developed multiple packages and modules in C, Python, Java and JavaScript for various utilities and functionalities, to help engineers. **Github** (@abhaytr): <https://github.com/abhaytr>, **PyPi**: <https://pypi.org/user/abhaytr>, **Portfolio Website**: <https://abhaytr.github.io>
- ❖ Developed [MultiCrypt Algorithm](#) for Secure Hybrid Encryption (Modified RSA and coded my own algorithm for Symmetric Encryption).
- ❖ Developed a small level Custom Protocol on TCP. Developed Server for the same in C and Client for the same in Java.