

# 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

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| <b>IT Infrastructure Lead<br/>and Software Engineer</b>  | <b><u>Youth4Nation Foundation</u><br/>(Internship)</b>   | <b>May 2023 – Jul 2023<br/>Delhi (India)</b>             |
| <ul style="list-style-type: none"><li>❖ 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 <a href="#">Organization's Website</a>, and optimized it for SEO.</li><li>❖ Designed and developed a <b>Member Enrolment System Software with ID Card Facility</b> which is being used to enrol <b>1000+ existing Members and all future Members</b>. Developed an <b>Online Payment System</b> using existing solutions.</li><li>❖ Developed a <b>Member E-Mail OTP Based Authentication and SHA-256 and Salting based Session System</b>. Designed and developed a <b>Secure Authorization based CDN to store digital photos of the Members of the Organization securely</b>.</li><li>❖ Designed a <b>Stateless Reference Code Generation Algorithm</b> and developed a System to use the same using which Reference Codes can be generated for letters issued by the Organization, which can later <b>verify authenticity of the issued letter</b>, hence <b>providing credibility for the letters issued by the Organization</b>.</li><li>❖ <b>Technologies Used:</b> 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.</li></ul> |  |  |
| <b>Full Stack<br/>Web Developer</b>  | <b><u>Manipal University Jaipur</u><br/>(Internship)</b> | <b>Jan 2023 – Mar 2023<br/>Jaipur, Rajasthan (India)</b> |
| <ul style="list-style-type: none"><li>❖ Worked on the <b>development of the HR-Employee Appraisal Web Portal</b> which is being used to conduct the <b>appraisal process of 500+ employees and professors</b>. Made the Web Portal <b>highly secure</b> by <b>patching critical security loop holes</b>.</li><li>❖ <b>Re-Organized the Tech Stack</b> to make the Web Portal <b>highly fast and more efficient</b>.</li><li>❖ <b>Technologies Used:</b> HTML, CSS, React.js, Bash, Python (Uvicorn Server), REST APIs (developed using FastAPI), MongoDB.</li></ul>  |  |  |

## 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 [@aksheetpatel](#). 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:** 100 Days Badge 2024, 50 Days Badge 2024, 2023. **LeetCode Profile** (@abhaytr): <https://leetcode.com/abhaytr>
- ❖ **HackerRank:** 5★ 30 Days of Code Badge, 4★ Problem Solving Badge, 3★ Java. Completed HackerRank Certifications for various skills.  
**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.