

Yash Singh

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TECHNICAL SKILLS

C++, Java, Virtualization, Microsoft Suite, VS Code, Linux, Docker, GitHub, Power BI, WireShark, Networking, AWS

PROJECTS

- PocketPi – A Portable Raspberry Pi NAS | *Raspberry Pi, Bash Scripting*** *Jan 2025 – Apr 2025*
- Developed a low-cost, portable Network Attached Storage using Raspberry Pi and OMV for cloud storage and file sharing, reducing implementation costs by over 60%.
 - Configured a fully headless setup using SSH and the web-based OpenMediaVault UI, eliminating the need for dedicated peripherals.
 - Enabled storage expansion with support for 4 USB flash drives, SSDs, and configured both SMB/CIFS and NFS protocols to ensure seamless cross-platform compatibility.
 - Achieved stable file transfer speeds between 7–9 MB/s for large file operations, a performance level optimized within the Raspberry Pi's 100 Mbps Ethernet.
- A Synchronized Home Automation Framework | *Python, Raspberry Pi, IoT*** *Jun 2024 – Nov 2024*
- Engineered an comprehensive IoT-based automation system using ESP32, Raspberry Pi, Blynk for real-time, Wi-Fi-enabled device control.
 - Implemented secure MQTT-based communication framework along with robust error-handling mechanisms to ensure enhanced data integrity and improved fault tolerance.
 - Integrated a scalable architecture with sensor-driven automation like PIR-based lighting control, resulting in optimized resource utilization and energy efficiency by nearly 30%.
 - Designed and enabled the seamless integration of diverse smart devices, ensuring interoperability and efficient communication for both smart home ecosystems and large-scale industrial IoT applications.
- FinLedger – Personal Finance Tracker | *Python, Tkinter, MySQL*** *Jan 2024 – Mar 2024*
- Developed a personal finance application with a user-friendly Tkinter interface and categorizing more than 10 types of transactions.
 - Structured the application with modular Python classes and implemented user authentication using hashed passwords and session management.
 - Integrated dynamic charts and graphs—leveraging matplotlib with Tkinter—to visualize income, expenses, and savings trends for regular users.
 - Optimized SQL queries and managed application state for responsive data handling; implemented robust CRUD operations to interact with a MySQL database backend.

EXTRA-CURRICULAR

- Served as a core member of the **GeeksforGeeks Club**, actively managing the club's social media platforms and spearheading outreach initiatives that increased event participation by 40%.
- Selected as one of the top 10 finalists out of over 200 participants in a competitive CTF cybersecurity competition organized by the Linux Club, demonstrating strong problem-solving skills.
- Volunteered at the Foragers Event for event planning, logistics coordination for over 200 attendees, and on-ground management alongside a team of 12 volunteers, ensuring smooth execution of the event.
- Completed the Advent of Cyber 2023 event by TryHackMe, gaining hands-on experience in penetration testing, network security, and identifying machine vulnerabilities.

EDUCATION

VIT Bhopal University, Bhopal	2022 – 2026
<i>B.Tech. in Computer Science and Engineering</i>	<i>CGPA: 8.91 / 10</i>
YMCA Centenary School & College, Prayagraj	2021
<i>CBSE Board – Class XII</i>	<i>Percentage: 84.4%</i>
YMCA Centenary School & College, Prayagraj	2019
<i>CBSE Board – Class X</i>	<i>Percentage: 91.0%</i>