Yash Singh

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EDUCATION

VIT Bhopal University — Bhopal
Bachelor of Technology in Computer Science and Engineering – CGPA: 8.90 — *Nov 2022 – Present*

YMCA Centenary School & College — Prayagraj
High School Graduate(12th) – 84.4% — *2021*

YMCA Centenary School & College — Prayagraj
Secondary School Education (10th) – 91.0% — *2019*

TECHNICAL SKILLS

Languages: C++, MySQL, PlSql, Python, Java, HTML/CSS
Embedded & IoT: Raspberry Pi, Arduino, ESP32, Robotics, Automation, Sensor Integration
Developer Tools:Git, GitHub, VS Code, VirtualBox, Microsoft Suite, WireShark, Kali Linux, Ubuntu, Hypervisor
Relevant Coursework: Data Structures, Computer Architecture, Computer Networks, Operating Systems, Object Oriented Programming, DBMS

PROJECTS

Intelligent Fill-Control |*Python, Raspberry Pi, IoT, Ultrasonic Sensors* — *Feb 2023 – Apr 2023*
– Developed an IoT-based automated water level control system using Python, Raspberry Pi, and ultrasonic sensors..
– Implemented real-time monitoring and GPIO-controlled valves for dynamic flow regulation and fluid management.
– Integrated 8-segment LED display, LED indicators, and buzzers for data visualization and safety alerts.
– Optimized for smart home automation and industrial use cases requiring embedded systems and sensor-based control.

A Synchronized Home Automation Framework | *Python, Raspberry Pi, IoT* — *Feb 2024 – Jun 2024*
– Built a Wi-Fi-enabled IoT home automation system using ESP32, and Blynk for real-time device control.
– Implemented sensor-driven automation (e.g., PIR-based lighting), boosting energy efficiency by 30%.
– Used MQTT protocol, Raspberry Pi, and robust error-handling for secure and reliable communication supporting the integration of 10+ smart devices and 8+ modules for smart home.

FinLedger – Personal Finance Tracker | *Python, Tkinter, MySQL* — *Jan 2025 – Jun 2023*
– Designed a GUI-based finance tracker using Python and MySQL to record and manage income and expenses.
– Implemented a normalized database schema for users, transactions, and categories with CRUD operations.
– Generated category-wise and monthly spending reports via SQL queries, enhancing financial visibility.

EXTRACURRICULAR & ACHIEVEMENTS

Problem Solving Achievements
– Solved 150+ problems across LeetCode, GeeksforGeeks, and Codeforces
– Consistently participated in coding contests and other competitive programming platforms

Leadership & Extracurriculars
– Core member of **GeeksforGeeks Club** –managed social media & outreach.
– University Chess Team Player — demonstrated strategic thinking and led multiple intra-college sports events, showcasing leadership, event coordination, and teamwork skills.
– Volunteered at the Foragers Event organized by the D2C Club — actively contributed to event planning, logistics coordination, and on-ground management.

CERTIFICATIONS

Generative AI – IBM Center for Excellence — April 2025
IBM

Blockchain Essentials – IBM Center for Excellence — May 2025
IBM

Advent of Cyber 2023 - TryHackMe — Nov 2023
TryHackMe