# **Sukhmandeep Singh**

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#### **SUMMARY**

A passionate and curious Computer Science Engineering student (CSE '27) at Chandigarh University with hands-on experience in Java, C/C++, Python, HTML, CSS, and Oracle SQL. I specialize in cybersecurity practices, full-stack development, and Al-driven applications, with strong foundations in data structures, algorithms, and system architecture. Proficient with tools like Burp Suite, Nmap, Shodan, and Wireshark, I combine technical skill with creative thinking—building everything from secure Java-SQL desktop apps to visually engaging, Al-powered web interfaces. With multiple hackathon wins, a team-first mindset, and an eye for thoughtful design, I bring originality, optimism, and a problem-solving spirit to every challenge I take on.

#### **TECHNICAL SKILLS**

- Programming Languages: Java, C/C++, Python, PL/SQL, HTML5, CSS3.
- Software Applications: AutoCAD, MySQL, Visual Studio, Oracle XE, Canva, Linux, Microsoft 365, IntelliJ, Git, PyCharm, Google Colab, Unity, Arduino IDE, VMWare, Virtual Box.
- Coursework: Database Management Systems, Data Structures & Algorithms, Object-Oriented Programming, Linux fundamentals.

#### **PROJECTS**

Framed By Power, Judged By Data | Python, GPT APIs, Wikidata, Historial AI tool

May 2025

Developed an Al-powered tool that analyzes historical figures through a neutral, data-driven lens. The system combines user input with GPT-generated perspectives and real-time Wikidata parsing to offer unbiased second opinions. Designed to highlight ethical gray areas in leadership using structured, multi-phase analysis. Currently being adapted into a responsive web app with a modern, frosted-glass UI..

**Sorting Visualizer** | C++, SFML, Data Structures & Algorithms, Graphical Representation

Sept 2024

Developed an interactive sorting visualizer to represent sorting algorithms such as Bubble Sort, Merge Sort, and Quick Sort graphically. Used SFML (Simple and Fast Multimedia Library) in C++ to render real-time visual animations for algorithmic steps. Focused on clarity and smooth performance to aid algorithm comprehension through step-by-step graphical feedback. Enhanced user experience by maintaining a consistent output format while integrating image-based visual elements.

College Management System | Java, Oracle SQL, Swing GUI, JDBC, Relational Database Design

Jan 2025

Built a desktop application that retrieves and displays student course details based on name input, using Java Swing for the interface and Oracle SQL for backend data. Designed a normalized relational database structure with Students, Courses, Enrollments, and CourseTags tables. Established JDBC connectivity, implemented dynamic query handling, and ensured real-time data retrieval through user-friendly input forms. Focused on clean UI/UX and robust backend logic.

# PROFESSIONAL SKILLS

Leadership | Disciplined | Curious | Creative Decision Making | Adaptable | Growth Oriented Mindset

## **ACADEMIC ACHIEVEMENTS AND CERTIFICATIONS**

- Research paper accepted in Microsoft CMT conference
- 6 weeks internship at Intel Inc. & Design Thinking
- 1 month web development internship at Unified Mentor
- 3 Star Badges in C, C++ and Python on HackerRank
- Certifications of Team Skills & Design Thinking
- Coursera Certifications in DBMS & Statistics

# **EXTRA-CURRICULAR AND CO-CURRICULAR ACHIEVEMENTS**

- CADMANIA: AutoCAD Competition, achieved 4th rank
- HackMatrix Hackathon by IIT Patna on Unstop, secured 7<sup>th</sup> Rank
- Created a web based self portfolio using web development tools
- Participated in Zinnovatia 2.0: The Largest Hackathon by Chandigarh University.
- Participated in CodeRelay: A LeetCode Competition.

### **EDUCATION**

Bachelor of Engineering in Computer Science (BE-CSE)   Chandigarh University	CGPA: 8.42	2023-2027
Intermediate   Government Senior Secondary School, Purkhali   Punjab, Rupnagar	Marks: 93%	2022-2023
Matriculation   Netaji Model School, Rupnagar   Rupnagar, Punjab	Marks: 82%	2020-2021