

# SAKSHAM GUPTA

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## SUMMARY

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Final-year Computer Science Engineering student with a strong foundation in **Data Structures and Algorithms (C++)** and hands-on experience building **Python-based data tools, AI-powered automation systems, and low-level utilities**. Skilled in translating real-world problems into efficient, scalable solutions using **Python, C++, and REST APIs**. Interested in backend systems, data-driven applications, and practical software engineering.

## PROJECTS

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### Personal Finance Dashboard ([GitHub](#))

*MongoDB, Express, React, Node.js, JWT authentication*

- Developed a MERN-based finance dashboard for **tracking expenses, investments, and net worth**.
- Implemented secure authentication, REST APIs, and real-time portfolio calculations using live market data.
- Built responsive dashboards and charts using **React, TailwindCSS, and Chart.js**.

### AI Job Application Assistant ([GitHub](#))

*Next.js, React, Tailwind CSS, PostgreSQL, Prisma*

- Built an AI-powered job application assistant using **Next.js 14, Prisma, and PostgreSQL**.
- Integrated **OpenAI API** to generate personalized resumes and cover letters.
- Implemented GitHub OAuth authentication using NextAuth.js.
- Developed a responsive dashboard with **React and Tailwind CSS**.

### File Compression Tool (Huffman Coding) ([GitHub](#))

*C++, STL, Data Structures*

- Built a **command-line file compression utility** using Huffman coding for lossless compression.
- Implemented frequency analysis, **priority queues**, and tree-based encoding to generate optimal prefix codes.
- Designed bit-level encoding and decoding logic for efficient binary file processing.
- Strengthened understanding of **trees, heaps, memory efficiency**, and low-level system design.

## SKILLS

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**Core:** Data Structures & Algorithms, Problem Solving, Databases, Computer Networks, Operating Systems  
**Languages:** C/C++, Python, Java, SQL, JavaScript  
**Technologies:** Git/GitHub, Docker, REST APIs, Pandas, Matplotlib

## ACHIEVEMENTS

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- Solved **300+ Data Structures and Algorithms problems** across online coding platforms, improving algorithmic thinking and coding efficiency.
- Designed and delivered multiple **end-to-end academic and personal software projects**, applying core CS concepts to real-world systems.

## EDUCATION

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Chitkara University – BE in Computer Science Engineering

Rajpura, Punjab — 2022 – 2026

Indus Global School

Chandigarh — Senior Secondary (2021 – 2022)

Indus Global School

Chandigarh — Secondary (2019 – 2020)