Sarthak Singh

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Education

Program	Institution	CGPA	Year
Bachelor of Technology (CSE)	Graphic Era Hill University Dehradun Uttrakhand	**8.0/10.0**	2023-27

Course Projects

1. *Bus Route Optimizer* — Jun–Jul 2025
(B.Tech / Faculty: Ms. Swati Joshi)

○ Developed a Python-based routing system using NetworkX, Dijkstra's algorithm, and Google Maps API.

○ Implemented load and capacity-based logic to reduce fleet size while maintaining service efficiency.

○ Automated stop weight calculations to enhance route planning accuracy.

2. *File Encryption System* — Apr-May 2025
(B.Tech / Faculty: Ms. Sonal Malhorta)

○ Built a secure file encryption app with Python and Streamlit supporting text and image files.

○ Integrated XOR cipher with random and pseudo-random key generation for customizable encryption strength.

○ Designed an entropy-based metric to compare and validate encryption robustness.

3. *TrainoraAI* — Jan-Present 2025
(Co-Founded IntrinsAi.com)

○ Developed an AI chatbot using Azure OpenAI (GPT-4o mini) and Azure AI Search with Retrieval-Augmented Generation.

○ Processed, cleaned, and indexed curated health data for context-aware responses.

○ Applied advanced prompt engineering to improve domain-specific query accuracy.

4. *Event Manager* — Jul-Aug 2025
(B.Tech / Independent Project)

○ Built a Streamlit-based platform for creating, organizing, and tracking social events.

○ Integrated PostgreSQL database for storing event details, participants, and expenses.

○ Added real-time budget tracking and menu-based cost calculation for streamlined event planning.

5. *Inventory Manager* — Nov-Dec 2024
(B.Tech / Faculty: Dr. Prateek Shrivastava)

○ Developed a desktop inventory control app using Java Swing + AWT with PostgreSQL backend.

○ Implemented Admin & Client modes, dynamic SQL-based inventory loading, and real-time cart management.

○ Automated total calculation, billing, and stock updates with integrated business logic.

Online Courses

○ Object Oriented Programming: NPTEL (Jan-Apr 2025),

○ Database Management System: NPTEL (Jul-Sep 2025),

Technical Skills

○ Programming Language: C, C++, Java, Python

○ Database System: PostgreSQL, Oracle

○ Framework: Streamlit, Swing, AWT, AWS Amplify, AWS App Runner, NetworkX

○ Tools: VS Code, GitHub, pgAdmin, Microsoft Office

Achievements/Awards

○ Part of NVIDIA Inception Program and AWS for Startups through IntrinsAI.com