Siddhant Payal

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EDUCATION

Graphic Era Hill University	Dehradun, Uttarakhand
B.Tech in Computer Science and Engineering (CGPA: 8.49)	*2023 – Present*
The Himalayan Public School	Dehradun, Uttarakhand
12th ISC, 80.6%	*2023*
The Himalayan Public School	Dehradun, Uttarakhand
10th ICSE, 92.6%	*2021*

PROJECTS

HyperGuard: Real-Time Intrusion Detection and Automated Threat Prevention

Flask, Redis, Node.js, Chart.js, Socket.IO

- Built a lightweight proxy system that detects and blocks DDoS and brute-force attacks in real-time.
- Used Redis for rate-limiting and IP blacklisting with low-latency performance.
- Created a live dashboard for visualizing logs, system usage, and threat metrics.
- Implemented attack simulation tools and admin-controlled override features.

TurboSpell: High-Speed Spell Correction Using Edit Distance

JavaScript, Node.js, Python

- Implemented Levenshtein Edit Distance with dynamic programming for real-time correction suggestions.
- Enhanced search performance using Trie and BK-tree data structures.
- Built both CLI and web UI for interactive spell correction.

Sahayak: Multilingual Voice Assistant for Elderly and Disabled Users in India

Python, HTML, CSS, JavaScript, Transformers, MongoDB

- Designed an accessible voice assistant with multilingual support and speech recognition.
- Integrated AI-powered response generation and text-to-speech using Transformers and pyttsx3.
- Used MongoDB for storing user preferences and interaction history securely.

POSITION OF RESPONSIBILITY

Member, CO-DEV Club	Graphic Era Hill University
Coding and development club	*2025 – Present*

- Coordinated Hack-o-Holic 3.0, a 24-hour hackathon with 100+ participating teams.

TECHNICAL SKILLS

Languages: C, C++, Java, JavaScript, Python
Developer Tools: Git, Jenkins, VS Code, Postman
Technologies/Frameworks: AWS, Flask, Redis, Node.js, Vertex AI, Socket.IO, Chart.js, MongoDB, Transformers
Relevant Coursework: Data Structures, Design & Analysis of Algorithms, Cloud Computing, Cybersecurity