AAYUSH SAINI

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Education

Graphic Era Hill University, Dehradun   **2022 - Present**
B.Tech in Computer Science & Engineering

A.B.N. Sr. Sec. School, Roorkee   **2022**
Senior Secondary(XII), CBSE BOARD

A.B.N. Sr. Sec. School, Roorkee   **2020**
Secondary(X), CBSE BOARD

Projects

LinkedIn Post Generator   <u>**Source Code**</u>
- Designed an AI-powered content generator using NLP that produced over 250 LinkedIn-ready posts with industry-specific tones.
- Engineered a Streamlit-based user interface featuring drag-and-drop components and real-time feedback, reducing manual writing time by 60%, with live editing and preview via Streamlit.
- Tech Stack: Python, NLP, Streamlit, Git

Mini Compiler   <u>**Source Code**</u>
- Developed a custom compiler for a simplified C-like language using Flex and Bison, supporting variables, expressions, and control structures, while reducing code complexity by 40% through optimized symbol table management and intermediate code generation.
- Generated Three Address Code (TAC), managed symbol tables, and implemented intermediate code logic for parsing and execution.
- Tech Stack: C, Flex, Bison.

File Compression System   <u>**Source Code**</u>
- Implemented Huffman encoding to achieve up to 70% reduction in file size, optimizing storage efficiency.
- Enabled users to upload, compress, and download files up to 2MB, with results in under 2 seconds.
- Tech Stack: HTML, CSS, JavaScript.

Food Management System   <u>**Source Code**</u>
- Developed a full-stack platform designed for real-time comparison of 15+ mess services based on live pricing, meal availability, and reviews, tailored for a university environment.
- Integrated optimized search and recommendation features using OS-level algorithms like FCFS, SJF, Round Robin, and Banker's Algorithm to simulate smart service queueing and improve request prioritization by up to **40%**.
- Engineered using HTMl, CSS, JavaScript, Node.js, Express.js, and MongoDB, with real-time updates via Socket.io and secure authentication through JWT and bcryptjs.

Technical Skills

Languages: C, Python, C++, Java, JavaScript,PHP
Frontend: React, TailwindCSS, HTML5, CSS3, Bootstrap,
Clouds & Databases: MySQL, MongoDB, Oracle23c ,AWS
Backend : Node.js, Express.js, Flask
Tools and DevOps: Git, VS Code, GitHub, Docker, Vercel, Railway, PyCharm
Data Science & Machine Learning: NumPy, Streamlit, PIL, Matplotlib, Pandas

Certifications

- SQL by Udemy.
- Cisco Networking Basics.
- Python Basics by HackerRank.
- AWS Cloud Quest.

Algorithmic Competitions/ Achievements

- Completed AWS cloud architecture certifications, gaining expertise in scalable application deployment.
- Built functional prototypes in multiple national hackathons, demonstrating creativity and efficiency under pressure.
- Participated in the Google Cloud Facilitator Program, gaining hands-on experience in cloud computing, virtual machines, Kubernetes, and cloud-native tools on the Google Cloud Platform (GCP).