

Akhil Nautiyal

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OBJECTIVE

A motivated and skilled Computer Science student seeking opportunities to leverage my expertise in full-stack development, machine learning, and software engineering to contribute to innovative technological solutions.

ACADEMIC DETAILS

Year	Degree/Exam	Institute	GPA/Marks(%)
Aug, 2022 - Present	B.TECH CSE	Graphic Era Hill University Dehradun	7.9/10.0
2021	12 th , C.B.S.E	Social baluni public school	84.80 %
2019	10 th , C.B.S.E	Social baluni public school	91.80 %

INTERSHIPS

- **SDE Intern, TBI-GEU (July, 2024 - Oct, 2024)** : Engaged in hands-on learning and development of web application. During this internship, I gained comprehensive experience in full-stack development, building both the frontend and backend of websites. This internship was primarily focused on understanding the working dynamics of a tech organization and honing my technical skills through real-world projects.

TECHNICAL SKILLS

- **Languages:** C++ (Proficient), C (Proficient), Python v, JavaScript (Proficient), Java.
- **Frameworks:** Express.js (Proficient), React.js, Node.js.
- **Databases:** MongoDB, MySQL.
- **Tools & Technologies:** Git, REST API.
- **Development Stack:** MERN Stack.
- **Machine Learning Tools:** TensorFlow, Keras, scikit-learn.
- **Operating Systems:** Windows, Linux.

PROJECTS

- **MiniOS – Lightweight OS Environment (Ongoing):** Customized **ReactOS** to develop a lightweight, Windows-like environment. Modified boot screen, icons, and system UI; developed core applications like **TextMAN** (text editor with Qt), **MusicWalker** (MP3 player using SDL_mixer), and **The Spacemen** (2D shooter game using SFML). Built a custom command-line shell using command parser/executor design. All apps coded in Qt with VirtualBox-based testing and debugging.
Technologies Used: ReactOS, Qt 5.5, SDL_mixer 1.2.13, SFML 2.1, C++, MSYS2, CMake
- **MyDrive – File Storage Platform (01/2025):** Developed a **cloud-based file storage system** with **upload, preview, and download** features. Integrated **JWT authentication** and **Appwrite** for secure file management.
Technologies Used: Node.js, Express.js, MongoDB, Appwrite, Multer, JWT, EJS
- **Ransomware (06/2024 - 07/2024):** Created a **functional ransomware** program for academic research to study design and impact. Implemented encryption of files and a ransom note generator, ensuring execution in a **controlled environment**.
Technologies Used: Python, PyCrypto, Tkinter
- **TriCode Compiler (09/2024):** Developed a comprehensive **web-based compiler** for HTML, CSS, and JavaScript; implemented secure user **authentication and authorization** for project management; designed a responsive UI using Tailwind CSS for improved usability; enabled **real-time code execution** with immediate feedback; facilitated project downloads as zip files for user convenience.
Technologies Used: MongoDB, Express.js, React.js, Node.js (MERN stack), Tailwind CSS, JWT, REST API
- **PasswordVault (11/2023 - 12/2023):** Created a **self-hosted password manager** and generator software. Implemented **encryption and brute-force protection**, integrated with password manager for securely storing and viewing user passwords.
Technologies Used: Python, SQLite, Tkinter, OOP