

AKRITI UNIYAL



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EDUCATION

B.Tech in Computer Science and Engineering

Graphic Era University, Dehradun

8.90/10 CGPA

2022 - present

I.S.C.

Convent of Jesus and Mary, Dehradun

90.80%

2020 - 2021

PROJECTS

Parser Visualizer | JavaScript, HTML/CSS, Python, Django

May-2025

- Implemented both SLR and CLR parsers to analyze context-free grammars and parse strings accordingly.
- Developed an interactive web-based frontend to visualize the parsing process step-by-step.
- Enabled input of string to simulate and compare the parser behaviors.
- Used Django as backend to connect frontend visualizer with parser logic written in Python.

Multithreaded Web Proxy Server | C, Pthreads, ARC, Flask

March-2025

- Developed a multithreaded web proxy server in C using socket programming and POSIX threads.
- Implemented the Adaptive Replacement Cache mechanism to optimize cache performance based on recency and frequency of access.
- Built a frontend interface to visualize live proxy logs, cache contents, and request statistics.

Brain Tumor Detection | CNN, Flask, Python

January-2025

- Developed an advanced Convolutional Neural Network (CNN) model for detecting brain tumors from MRI scans.
- Trained the model using 3,000+ labeled images sourced from Kaggle, ensuring high-quality data preprocessing.
- Achieved 98% accuracy in tumor classification through model optimization.
- Deployed the trained model using Flask, allowing users to upload MRI scans and receive real-time predictions.

Chat Application | MERN Stack, MongoDB

July-2024

- Built a Chat Application using MERN Stack.
- Implemented user authentication and authorization using JSON Web Token for secure login and session management.
- Stored user data in an encrypted format using MongoDB.
- Implemented real-time communication using Socket.IO.
- Designed an intuitive React-based UI for seamless user experience.

TECHNICAL SKILLS

Programming Languages: C, C++, Java, Python(Pandas, NumPy, Scikit-learn), JavaScript, PHP.


Tools & Platforms: Git, GitHub, JupyterNotebook.

Frameworks & Libraries: Reactjs, Nodejs, Expressjs, MongoDB, Tailwind CSS, Pandas, Numpy, MySQL, Laravel, Java Swings.

CODING PROFILES

- Solved 450+ DSA questions across various platforms.

EXTRACURRICULAR

- SIH 2024 Finalist: Among the top 5 teams out of 500+ teams. Built an interactive Virtual Herbal Garden with 3D plant models, search filters, and multimedia integration. 
- Collaborated in a group project, developed a placement portal in Laravel.
- Received a cash prize from Ordnance Factory for academic excellence (2019, 2021).

POSITIONS OF RESPONSIBILITY

- Organized multiple coding events, seminars, and workshops in college.
- Private Tutor(2021): Delivered tutoring sessions in Computer Programming and Mathematics to school students, to strengthen conceptual clarity and academic performance.