

SHIVAM RAI

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Education

Graphic Era Hill University

Bachelor of Technology in Computer Science (CGPA: 7.06/10)

Aug 2022 – Present

Dehradun, Uttarakhand

International Hindu School

Intermediate (CBSE) - 67%

2021

Varanasi, Uttar pardesh

International Hindu School

Matriculation (CBSE) - 68.66%

2019

Varanasi, Uttar pardesh

Internships

Front-End Web Development Intern, Edunet Foundation (IBM SkillsBuild)

Aug 2025 – Oct 2025

- Selected for the AICTE–Edunet 6-week virtual cohort focused on front-end development using HTML, CSS, and JS.
- Completed **IBM SkillsBuild** coursework while improving skills in **HTML layout, CSS styling, and JS logic**.
- Built a practical project under guidance, applying HTML for structure, CSS for styling, and JavaScript for interactivity.
- Maintained communication, met milestones, followed program guidelines, and demonstrated progress in front-end skills.

SDE Intern, TBI-GEU

Nov 2024 – Feb 2025

- Engineered a production-ready Full-Stack Online Food Ordering System from scratch, implementing 8+ core features (e.g., cart, payment integration, user authentication) and designing it to support 100+ concurrent users.
- Collaborated via Agile practices, enhancing backend data workflows, **version control**, and CI/CD processes.
- **Designed backend data integrity checks**, optimized API performance, and contributed to production deployment.

Projects

Autism Prediction - Machine Learning — Python, Pandas, NumPy, Scikit-learn 🐍

May 2025

- Modeled a machine learning classifier for predicting autism by analyzing behavioral data from the Autism Detection dataset, including data preprocessing, feature scaling using normalization algorithms, and performance evaluation with over 90% accuracy.
- Implemented Selenium to create an instance of Chrome in order to interact with the correct elements of the web page.
- multi-model classification pipeline for early-stage autism spectrum disorder (ASD) prediction by analyzing behavioral and demographic features from the Autism Detection dataset.

C Language Compiler — C++, Lex Analysis, Syntax Analysis, Syntax Tree, Code Generation 🐍

Jan 2025

- Implemented lexical analysis to tokenize source code using defined patterns and efficient character stream processing key.
- Built a **down Recursive Descent Parser** to generate an Abstract Syntax Tree (**AST**) from grammar specifications.
- Designed semantic analysis to validate types cleanly, resolve identifiers, manage scopes, and detect compile-time errors.
- Developed a code generation module converting validated AST nodes cleanly into intermediate representation for output.

Ransomware Simulation System — Python, pathlib, Cryptography, Tkinter 🐍

Jul 2024

- Developed a GUI-based ransomware simulator for demonstration and awareness of encryption-driven data lock scenarios.
- Implemented encryption and decryption Python's Cryptography (Fernet) module to ensure confidentiality and recovery.
- Designed a **Tkinter** interface enabling users to trigger encryption, restore files, and observe the ransomware workflow.
- Emphasized ethical usage, explaining attack behavior safely in controlled conditions for training and educational learning.

Technical Skills

- **Languages:** C, C++, Python, JavaScript
- **Frameworks/Libraries:** React, Node.js, Express, Cryptography
- **Databases:** MongoDB, MySQL
- **Tools:** Git, Jupyter Notebook, VS Code, Postman

Certification

- AWS Machine Learning Learning Plan : Issue Date: Oct' 2025
- Completed Data Structures in C course Udemy (Jan 2024), improving problem-solving foundation.
- Cisco Networking Essentials Certification : Issue Date: 2024
- Completed SWAYAM 4-credit Cyber Security course (May 2024) offered by Dr. Babasaheb Ambedkar Open University.