Sumit Singh Rana
Email: **sumitrana7351@gmail.com** | Phone: **9368331094**
LinkedIn: **linkedin.com/in/sumit-singh-rana-b26946309** | Github: **github.com/Sumit7351**
Location: Dehradun,India

ACADEMIC DETAILS

Year	Degree/Exam	Institute	CGPA/Marks(%)
2022 - 2026 (Expected)	B.TECH in Computer Science	Graphic Era University	8.10/10.0
2022	12^{th}, $I.S.C$	Dehradun World School	92 %
2020	10^{th}, $I.C.S.E$	Dehradun World School	94.4 %

OBJECTIVE

A motivated Computer Science student with demonstrated experience in security **software development** and **machine learning**. Seeking to apply skills in algorithms and software design to contribute to innovative engineering challenges as a **Software Engineer**.

PROJECTS

- **ML-Powered Vulnerability Scanner** (June 2025 - July 2025) | **github.com/Sumit7351/Vulnerability-Scanner**
  Engineered a scalable security **software tool** to automate vulnerability detection (SQLi, XSS) across web applications.
  Trained a Random Forest model on 1,479 payloads using TF-IDF to simulate evasive attack patterns.
  Generated detailed security reports in HTML/JSON with severity insights and payload analysis.

- **SafeBuddy** (April 2025 - June 2025) | **github.com/Sumit7351/SafeBuddy**
  Developed and implemented a high-performance cryptographic tool leveraging **distributed and parallel** systems concepts to significantly reduce encryption/decryption latency.
  Applied multi-core CPU processing with the ChaCha20 algorithm, which demonstrates an advanced understanding of performance optimization in large software systems.

- **Pseudo-to-C-Compiler** (Mar 2025 - Apr 2025) | **github.com/Sumit7351/Pseudo-to-C-Compiler**
  Architected a complete compiler from the ground up, demonstrating core principles of **software design** and language processing.
  Implemented lexical analysis (Lex) and syntax parsing (Yacc) to translate pseudo-code into C, laying a scalable and foundational groundwork for larger software system development.

TECHNICAL SKILLS

- **Languages: C** , **C++** (proficient) , **Python** , **SQL**
- **Web Development: HTML**, **CSS**, **JavaScript**
- **Machine Learning:** YOLO, OpenCV, Scikit-learn
- **CS Fundamentals: Data Structures**, **Operating Systems**, Computer Networks, **Database System**
- **Developer Tools:** Git , GitHub, VS Code

CERTIFICATIONS

- **PwC** Cyber Security & Prompt Engineering - June 2025
- **Forage** Tata Cybersecurity Security Analyst Job Simulation - July 2025
- **NPTEL IIT Kanpur** Enhancing Soft Skills and Personality - May 2024

RELEVANT COURSEWORK

- Data Structures and Algorithms, Operating Systems, Machine Learning, Compiler Design, System Design

ACHIEVEMENTS

- **SWIMMING -** Involved in independent swimming competitions (2023), earned appreciation at community level meets.