

# AMAN SINGH

Dehradun, Uttarakhand

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🌐 [Linkedin](#)

🐙 [Github](#)

🔗 [LeetCode](#)

## EDUCATION

**Graphic Era Deemed to be University, Dehradun**

**2022 – Present**

*B.Tech - Computer Science and Engineering - CGPA - 9.64*

*Dehradun, Uttarakhand*

**Police D.A.V. Public School, Jalandhar**

**2021 – 2022**

*Class 12<sup>th</sup>, Percentage: 95.4%*

*Jalandhar, Punjab*

**Police D.A.V. Public School, Jalandhar**

**2019 – 2020**

*Class 10<sup>th</sup>, Percentage: 95.6%*

*Jalandhar, Punjab*

## COURSEWORK / SKILLS

- Data Structures
- Machine Learning
- Generative AI
- Devops
- Algorithms
- Operating Systems
- Database Management
- Computer Networks

## PROJECTS

**C Compiler Insights** 📄 | C/C++, Python (Flask), HTML, CSS, JavaScript, Git, GitHub

**April 2025**

- Led a team of **4** in designing and developing an educational compiler simulator aimed at bridging the gap between theoretical compiler design and practical implementation, with support for **4 core phases**: Lexical Analysis, Syntax Analysis, Parse Tree Generation, and Semantic Analysis.
- Engineered the backend logic using **C/C++** for compiler operations and integrated with a **Python Flask** server to enable seamless real-time visualization and user interactivity, tested with **50+** code samples including edge cases.
- Implemented version control using **Git** and managed collaborative development on **GitHub**, leading to a **30%** improvement in task tracking efficiency and reducing integration time by **40%** across modules.

**Sentiment Analysis -Online course Reviews** 📄 | Python, Sci-kit Learn, NLTK

**March 2024**

- Collaborated with **3** key stakeholders to define project requirements and constraints. Conducted in-depth research, comparing **3** feature extraction techniques: Bag of Words, TF-IDF, and Word Embedding (Word2Vec), analyzing over **5,000** online course reviews.
- Employed **3** machine learning algorithms—K-Nearest Neighbors, Support Vector Machine, and Naive Bayes—to assess model performance, processing datasets of **50,000+** reviews.
- Achieved a high accuracy rate of **93.34%** by optimizing feature extraction methods and classifiers, resulting in a **15%** improvement in model precision over initial baselines.

**Face Recognition-Attendance Automation** 📄 | Python, OpenCV, Streamlit, Excel

**November 2023**

- Designed and developed facial recognition algorithms, with the potential for intellectual property creation, contributing to an attendance automation system that could be deployed for **500+** users.
- Applied advanced troubleshooting and analysis to implement the Haar Cascade Classifier for precise frontal face detection, integrated with OpenCV2's face recognition algorithm, achieving a **96.78%** authentication accuracy while processing **1,000+** facial images.
- Engineered a user-friendly interface using the Streamlit library in Python, leading to a **25%** increase in user satisfaction and improving usability for **50+** daily active users.

## TECHNICAL SKILLS

- **Languages:** Python, C++, C, JavaScript, SQL, Java, Bash
- **Machine Learning:** Neural Networks, Tree Ensembles, Regression Models
- **Developer Tools:** Git, GitHub, Jupyter, VS Code, Selenium
- **Databases:** MySQL, MongoDB
- **Cloud Platforms:** Google Cloud Platform (GCP), Amazon Web Services (AWS)
- **Operating Systems:** Linux (Ubuntu), Windows
- **Web Development:** HTML, CSS, JavaScript, React.js

## COMPETITIVE PROGRAMMING

- Solved **550+** Problems on **Leetcode**. 📄
- Solved **200+** Problems across **GeeksforGeeks** and **Coding Ninjas**. 📄
- Rated **1690+** on **Leetcode Contest**. 📄

## CERTIFICATIONS

- Introduction to Git and GitHub - Google
- Participated in AWS JAM Day on Generative AI, Cloud Engineering and Machine Learning - AWS
- Data, ML, and AI in Google Cloud - Google Cloud Platform