Sarthak Aswal

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- Portfolio- https://sarthak-aswal.github.io/Portfolio-Website/
- Github - https://github.com/Sarthak-Aswal
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Skills and interests

Programming Languages	**C,** C++, Java
Frontend Technologies	HTML, JavaScript, CSS
Version Control	**Git**
Database	SQL

Education

Graphic Era Hill University, Dehradun 2021 - 2025
Bachelors of Technology in Computer Science and Engineering
Cgpa – 7.5

The Indian Academy, Dehradun 2020 - 2021
Higher Secondary Education (CBSE)
Percantage - 90

Projects

YouTube Comment Sentiment Analysis

• Developed an AI-driven sentiment analysis tool in Python to fetch YouTube comments using the YouTube API, analyzing over 5000 comments across 100 videos.
• Categorized sentiments into positive, neutral, and negative categories using Natural Language Processing (NLP) techniques, achieving 85% accuracy in sentiment classification.
• Automated the data-fetching and analysis process and providing actionable insights into audience sentiment trends.

ML Drawing Guesser

• Built a web-based application using HTML, CSS, and JavaScript that enables users to create simple sketches on a canvas.
• Implemented a K-Nearest Neighbors (KNN) algorithm from scratch to classify user drawings, comparing them to a trained dataset of images.
• Delivered an intuitive and responsive user interface, ensuring seamless interaction and accurate predictions for diverse sketches.

Multithreaded proxy server with LRU cache in C++

• Built a high-performance proxy server in C++ using socket programming and multithreading to handle multiple client requests concurrently.
• Designed and implemented an LRU (Least Recently Used) Cache using advanced data structures like hashmaps and doubly linked lists, optimizing cache lookups and updates with O(1) time complexity.
• Integrated the cache into the proxy server to reduce latency by 30% for frequently accessed data, improving overall response time.

Achievements and Leadership role

Amazon ML Hackathon (Team Leader) | Sept 2024

• Led a team in Amazon's ML Hackathon, developing a Python-based solution using Optical Character Recognition (OCR) and Natural Language Processing (NLP) techniques to extract parameters from complex input data.

• Achieved 70% accuracy in parameter extraction, securing a position in the Top 20

• Facilitated team collaboration, integrating diverse ideas and contributions to develop a cohesive solution while focusing on real-world applicability and scalability.

Hobbies and interests

- Playing chess
- Traveling