

# Manasi Suyal

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## Profile

Detail-oriented Software Development Engineer (SDE-I) with expertise in building scalable data pipelines, RESTful APIs, and real-time machine learning systems. Proficient in Python, C++, and SQL with a strong foundation in Data Structures, Algorithms, and System Design. Experienced in full-stack development and database management, with a proven track record of optimizing system performance and automating complex data workflows.

## Education

**Graphic Era Deemed to be University**  
*Bachelor of Technology in Computer Science and Engineering*

Dehradun, India  
Oct 2021 – June 2025

## Technical Skills

**Languages:** Python, C++, Java, SQL, JavaScript, HTML/CSS

**Developer Tools:** Git, GitHub, Linux CLI, AWS (S3, EC2), Postman, VS Code

**Libraries/Frameworks:** Flask, React.js, NumPy, Pandas, OpenCV, TensorFlow, Scikit-learn

**Core Concepts:** Data Structures and Algorithms, OOP, DBMS, Operating Systems, REST APIs

## Experience

### Software Development Intern

Oct 2024 – Nov 2024

CodSoft (*Remote*)

- Developed a movie recommendation engine using TF-IDF vectorization and Cosine Similarity, reducing response latency by 30%.
- Built a real-time face detection module utilizing OpenCV and Python multithreading for optimized frame processing.
- Implemented an AI agent for Tic-Tac-Toe using the Minimax algorithm with Alpha-Beta pruning to optimize search efficiency.
- Managed version control and code reviews using Git and GitHub within an Agile development workflow.

## Projects

### Tableau Market Intelligence Engine | | Python, SQLite3, REST APIs, Git

- Architected a market analytics tool that automates data extraction from REST APIs into a local SQLite3 database.
- Developed a "Whale Activity" detection script to analyze volume-to-market-cap ratios, identifying high-liquidity trends.
- Built a visual CLI dashboard with dynamic bar charts and multi-criteria filtering for real-time data analysis.
- Engineered a data persistence layer with automated SQL refreshes and CSV export functionality for offline reporting.

### Sign Language Detection System | | CNN, TensorFlow, OpenCV, Python

- Engineered a real-time ASL recognition system using CNNs, achieving 95%+ classification accuracy.
- Optimized inference speed to sub-150ms by implementing frame preprocessing modules for image normalization.
- Integrated pyttsx3 to provide real-time voice output, enhancing accessibility for hearing-impaired users.

### Superstore Sales Analytics Pipeline | | SQL, Power BI, Python, Flask

- Processed 10K+ sales records using SQL and Pandas to perform Exploratory Data Analysis (EDA) on revenue churn.
- Developed a Flask API to serve processed data metrics, facilitating integration between database and visualization layers.
- Built interactive dashboards to track KPIs, customer segmentation, and regional sales performance.

## Achievements

- **Naukri Campus Young Turks:** Ranked in the top 3.16% nationally among 50,000+ candidates (96.84 percentile) based on DSA and Core Engineering fundamentals.
- **Open Source Contributor:** Successfully contributed to Python backend logic and UI performance optimization during Hacktoberfest 2025.
- **Google Data Analytics:** Earned the Professional Certificate covering end-to-end data cleaning, SQL analysis, and visualization patterns.
- **Generative AI Certification:** Completed specialized training via LinkedIn Learning on LLM integration and prompt engineering for software workflows.