

RISHABH AGRAWAL

+919769319089 | rishabh.ma@somaiya.edu | [linkedin.com/in/rishabh-agrawal-110a09258](https://www.linkedin.com/in/rishabh-agrawal-110a09258) | github.com/19rishabh

EDUCATION

K.J. Somaiya School of Engineering

Bachelor of Technology in Computer Engineering; CGPA: 8.76

Vidyavihar, Mumbai

Oct. 2022 – May 2026

Kishinchand Chellaram (KC) College

Pre-University Education; HSC Percentage: 77.67%

Churchgate, Mumbai

2020 – 2022

GreenLawns High School

High School Education; ICSE Percentage: 97%

Breach Candy, Mumbai

Till 2020

EXPERIENCE

Machine Learning Intern

ONGC

2025

- Designed and implemented a **Retrieval-Augmented Generation (RAG)** model for contextual document-based question answering using **LangChain**, **Ollama**, and **HuggingFace**.
- Implemented **vector indexing** and enhanced knowledge retrieval by integrating an LLM.
- Improved pipeline speed and responsiveness, **optimizing AI workflow** for better operational efficiency.

Internship with Software Development Cell | [Demo](#) | [GitHub](#)

KJSSE

2024

- Developed a web-app using **Flask** to automate generation of **seating plans** for university examinations.
- Utilized **Python**, **Pandas**, and **Openpyxl** for data manipulation and dynamic Excel report generation.
- Created a streamlined and efficient tool that saved **significant time** during University exam schedule preparations.

PROJECTS

Algorithmic Trading Engine | *Flask, LightGBM, Docker, Chart.js, pandas, scikit-learn*

[Github](#)

- Engineered a full-stack, end-to-end quantitative trading pipeline, featuring a modular, **object-oriented architecture** and a multi-asset **backtesting engine** to evaluate strategy performance.
- Developed a factor-based ML strategy using LightGBM on normalized panel data and deployed the system as a containerized Flask application with an interactive Chart.js dashboard to the cloud.

KhetGuru | *MERN Stack, KNN, CNN, TensorFlow, Google Generative AI*

[Github](#)

- Developed a solution to empower farmers with **data-driven tools** to improve productivity and reduce costs.
- Implemented **crop recommendation system** based on extracted parameters using K-Nearest Neighbors (KNN).
- Developed **crop disease detection** system using Convolutional Neural Networks (CNN) to analyze crop images.
- Integrated **Google Generative AI** to power a conversational chatbot.

Smart Surveillance System | *YOLOv8, OpenCV, CNN, PyTorch, facerecognition*

[Github](#)

- Developed a real-time AI surveillance solution in Flask to automatically detect and respond to suspicious activities, including **weapons**, **fire**, and **recognized criminal faces** from live video streams.
- Fine-tuned a **YOLOv8 model** for object detection and a custom **CNN** for facial recognition, engineering a system of automated alerts to enhance public safety.

ACHIEVEMENTS

- **Top 10 Finalist** in the prestigious Pan-IIT PIWOT Hackathon 2025.
- **Treasurer of the Interact Club of Greenlawns High School** - Successfully organized multiple events.
- **First place** in the Flutter Workshop conducted by GDG.
- Won **40+** elocution, dramatics, aptitude and art competitions.

TECHNICAL SKILLS

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

Technologies: Machine Learning, Scikit-learn, Flask, MERN, Gemini API, LangChain, GenAI, PostgreSQL

Developer Tools: Git, Docker

Soft Skills: Problem solving, Public Speaking, Leadership, Logical Reasoning, Team Collaboration