MIT | Academy of Engineering
(An Autonomous Institute Affiliated to Savitribai Phule Pune University)

ARYAN KUMAR

B.Tech. - Electronics and Telecommunication Engineering

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BRIEF SUMMARY

Dynamic and results-driven Electronics and Telecommunication Engineering student with a minor in AIML, demonstrating proven expertise in developing machine learning, deep learning and computer vision solutions.

KEY EXPERTISE

AIML | C++ (Beginner) | Technical Documentation & Reporting | Time Management | Leadership | Figma

EDUCATION

MIT Academy of Engineering, Pune 2023 - 2027
B.Tech. - Electronics and Telecommunication Engineering | CGPA: **9.12** / **10**

BR DAV Public School, Begusarai 2022
12th | CBSE | Percentage: **85.20** / **100**

BR DAV Public School, Begusarai 2020
10th | CBSE | Percentage: **83.40** / **100**

INTERNSHIPS

Indian oil corporation limited | Oil / Gas / Petroleum 16 Jun, 2025 - 31 Jul, 2025
vocational Trainee

Key Skills: Instrumentation | sensors

This internship focuses on industrial instrumentation, with a particular emphasis on the sensors and transducers commonly utilized within a plant's instrumentation department. The role involves understanding the principles of operation, calibration, and maintenance of these devices as they relate to process control and plant automation.

Concept system | Office Equipment / Automation 01 Jun, 2025 - 31 Jul, 2025
Software Engineer Intern

Key Skills: Image Processing | Open CV | Background removal | Industrial Automation

This internship focuses on industrial automation, with a primary emphasis on image processing and computer vision using the OpenCV library

Code Alpha | IT / Computers - Software 01 Jun, 2024 - 30 Jul, 2024
Intern

Key Skills: Problem Solving | Python | API

This virtual internship focuses on Python Programming, with an emphasis on core Python concepts and real-world applications. The role involves hands-on practice in coding tasks, enhancing time management, independent learning, and task-handling skills.

PROJECTS

Road Accident Probability Prediction Using Supervised ML 01 Oct, 2025 - 01 Nov, 2025
Mentor: Dr. Abhilasha Joshi | **Team Size:** 3

Key Skills: Machine Learning | Python | Feature Engineering | Tools & Libraries

Project Link: https://colab.research.google.com/drive/19ji38Ftzli6WlekRtCq4-BQW4v8abvyQ

Built a supervised ML model to predict road accident probability by analyzing multi-factor datasets, improving early risk detection and enhancing road safety insights.

Football Player Coordinate Prediction using Machine Learning 15 Sep, 2025 - 20 Oct, 2025
Mentor: Dr. Abhilasha Joshi | **Team Size:** 4

Key Skills: Evaluation & Optimization | Data Processing & Analysis | Machine Learning & Modeling | Feature Engineering

This project predicts football players' future field positions using tracking data from NFL games. Features like speed, acceleration, and distances are used to train LightGBM /CatBoost models for X and Y coordinates. Model accuracy is evaluated using RMSE, MAE, MSE, and R^2. metrics. With the Least RMSE of 0.950 for the CatBoost Model.

An Automated Realtime Image Driven Quality Control : A vision based Solution for Industrial Object Classification

03 Feb, 2025 - 01 Aug, 2025

Mentor: Ms. Nutan Bansode | **Team Size:** 3

Key Skills: Image Processing | OpenCV | Bg Removal | API

Project Link: https://github.com/Sumit131204/Shape-api-

This project, "An Automated Realtime Image Driven Quality Control," is a vision-based solution designed to enhance quality inspection in industrial environments. Using OpenCV and other image processing techniques, the system automatically detects and classifies objects by their shape, size, and color with a high accuracy of 94.34%. I developed this as a hardware-independent, full-stack web application with a Flask backend and React frontend, which provides a user-friendly and efficient platform for quality control.

Real-time Drowsy Driver Alert System

01 Apr, 2025 - 31 May, 2025

Mentor: Ms. Nutan Bansode | **Team Size:** 4

Key Skills: Facial Landmark Detection | Python | OpenCV | Dlib

Developed a real-time drowsiness detection system using OpenCV and Dlib for facial landmark detection. The system monitors eye-blink ratios to classify a user's state as "Active," "Drowsy," or "Sleeping". It includes a serial communication protocol to alert the user when drowsiness is detected

SketchAI- Text to Image Generation using Stable diffusion model

05 Aug, 2024 - 04 May, 2025

Mentor: Dr. Kalpana Pawase | **Team Size:** 4

Key Skills: Stable Diffusion | Python | Text to Image | NLP

Project Link: https://github.com/Sumit131204/Text-to-image-stable-diffusion

Created a generative AI project that uses the v1.5 Stable Diffusion model to produce high-quality images from text prompts. This involved a deep dive into the model's architecture, including text encoding, the diffusion process, and working within latent space to optimize performance. The project showcases my ability to apply advanced AI models to creative and practical applications.

PUBLICATIONS / RESEARCH / WHITE PAPERS

An Automated Realtime Image Driven Quality Control : A vision based Solution for Industrial Object Classification

22 Aug, 2025

ICCUBEA- IEEE- 2025 | **No. of Authors:** 7

Key Skills: OpenCV | Image Processing

A project on "An Automated Realtime Image Driven Quality Control". The system is a vision-based solution for industrial object classification, capable of detecting an object's shape, size, and colour with 94.34% accuracy using OpenCV and a Flask web application

PERSONAL DETAILS

Gender: Male
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