Samanyu Bhate

Pune, Maharashtra · bhatesamanyu@gmail.com · +91 9834604247 · GitHub · LinkedIn

Education

Maharashtra Institute of Technology - Pune — Pune, Maharashtra
BTech Computer Science *GPA: 7.71 - Till 6th Sem* — Aug 2022 - June 2026

Work Experience

AlgoAnalytics
Data Science and Machine Learning Intern — Dec - Apr 2025
Yolo framework, Micro-controllers , System Architecture

- Developed an image classification model using AnoGANs and CNN-based approaches, reducing false positives and improving defect detection.
- Implemented data augmentation techniques to handle multiple edge cases and enhance model robustness.
- Worked on model training and report generation to evaluate performance and provide insights.

Projects

Tarzan — *August 2024 - Present*
Embedded Systems, Deep Learning, Sensors, Coding, Simulations — GitHub

- Developing an autonomous vehicle portable module for non-ADAS enabled cars.
- Uses an app to input images and run custom deep learning models (YOLOv8) to determine steering angle, acceleration, and braking values.
- Considers surroundings such as other cars, potholes, barricades, etc., for decision-making.
- Developed simulations in MATLAB using pure-pursuit modeling.

IRIS Website — *August - September 2024*
Web Development - React, Payments, Databases, APIs — GitHub

- Developed an official site for the club, handling multiple concurrent real-time payments and updating entries for events.
- Utilized Razorpay, Supabase Database, and Vercel for deployment.
- Implementing a RAG pipeline based chatbot for better user interaction.

Real-Time Parking Management System — *March - May 2024*
OpenCV, Multi-Threading, MQTT, Embedded-Systems — GitHub

- A system that takes in a live video feed and allocates parking based on parking availability.
- Uses OpenCV and Threading with YOLOv8 for real-time allocation, speeding up the process by 40%. Implemented using CCTV cameras and Raspberry Pi.

Formula 1 Data Analysis — *October - Dec 2024*
PyQt, PySpark, HDFS, ML, Web APIs — GitHub

- Developed a dynamic **PyQt**-based GUI to visualize Formula 1 race telemetry, integrating data from multiple APIs into **HDFS**.
- Leveraged Apache Spark (**PySpark**) to efficiently retrieve and process race telemetry data, achieving a 30% reduction in processing time compared to conventional methods.
- Implemented **Random Forest Classification** and **Linear Regression** models on race data to predict key race factors and optimize team strategy, achieving an 86% model accuracy.
- Working on automating race data imports using **Sqoop** for continuous data availability.
- Testing **Flume** calls for real-time data streaming ahead of the 2025 season.

River Cleaner Project — *June - Current*
OpenCV, Python, TensorFlow

- Created a live feed via MJPG streamer using a camera interfaced to a Raspberry Pi.
- Developed a system to update object counts and activate sensors for river condition data collection.
- Implemented a conveyor belt to collect floating garbage using a makeshift bin.
- Completed MQTT publisher and broker setup, camera, and YOLOv8 integration.

Skills

Languages	Python, C, C++, Java
Packages	PySpark, OpenCV, Pandas, NumPy, TensorFlow, Apache Ecosystem, ReactJs, NodeJs, Flask, PyQt
Electronics	Raspberry Pi, STM32, ESP and Arduino Family
Databases	MySQL, MongoDB, PostgreSql
Software	MATLAB, SolidWorks
General	UML diagrams, SRS Documentation, GIT and GITHUB
Soft Skills	Communication, Team Collaboration, Adaptability, Problem-Solving

Awards

Smart India Hackathon (SIH) 2024- Top 25 Finalist: Collaborated with a multidisciplinary team to qualify as one of the top 25 teams in the internal round of SIH 2024. Designed and developed DopplerEcho, a radar-based drone detection system to identify and classify drones.

Positions of Responsibility

IRIS [Student Club, MIT-WPU] - Project Head