

ANUSH REDDY

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PROJECTS

2 Stage Loan Approval Valuation System [🔗](#) | [Flask](#), [Numpy](#), [AWS](#), [Docker](#)

Oct 2025

- Built and deployed a two-stage ML pipeline for loan approval (classification) and loan valuation (regression), exposed via a Flask API for real-time access.
- Developed a two-stage ML system where Stage 1 loan approval classifier achieved 99% accuracy ($F1=0.99$) and Stage 2 valuation regressor explained 86% of variance ($R^2=0.86$) with an average error of ± 2.5 .
- Developed monitoring dashboards to track model performance, detect data drift, and trigger retraining workflows.

Early Detection of Parkisons [🔗](#) | [Python](#), [Scikit-learn](#), [Streamlit](#)

Mar 2026

- Developed a machine learning pipeline for early detection of Parkinson's Disease using classification algorithms including Logistic Regression, SVM, and ensemble methods.
- Improved model performance from 85.7% (Logistic Regression) to 91.8% accuracy using ensemble techniques such as AdaBoost and Bagging with Random Forest, demonstrating effective model optimization.
- Implemented data preprocessing, feature selection, and model evaluation using accuracy metrics, and compared multiple models (Voting Classifier, Bagging, Boosting) to select the best-performing solution.

Efficient Algorithm for Autonomous Drone Swarm Coordination [🔗](#) | [C++](#), [LSTM](#)

Dec 2025

- Developed as my Final Year B.Tech capstone project, designing a decentralized AI-driven drone swarm system for autonomous counter-drone operations.
- Built a hybrid C++ and Python architecture, integrating high-performance swarm simulation with machine learning pipelines for prediction and optimization.
- Developed real-time 3D visualization dashboards to monitor swarm behavior, battery usage, role distribution, collision avoidance, and mission performance.

EXTRACURRICULAR

HACKRON 2025 — Ajeenkya DY Patil University, Pune

March 2025

- * Participated in a 24-hour hackathon focused on sustainable technology.
- * Designed a waste management platform for dark stores using IoT-connected weighing scales and expiry-based inventory prioritization.
- * Achieved a top 10 position among competing teams.

AMD AI Sprint — IIT Bombay ,Mumbai

July 2025

- * Built and fine-tuned LLM-based AI agents (Qwen, LLaMA, Deepseek) on AMD MI300X GPUs using agentic AI workflows.
- * Developed an Agentic AI Scheduling Assistant that autonomously scanned calendars, resolved conflicts, and proposed optimal meeting times across time zones.

SIH HACKATHON — M. S. RAMAIAH UNIVERSITY OF APPLIED SCIENCES

Dec 2025

- * A decentralized AI-driven drone swarm system designed for dynamic target selection, cooperative navigation, and effective threat neutralization.
- * By using weight-based battery optimization, auto-return protocols, and real-time obstacle avoidance to keep drones efficient and safe. It integrates QIFPD/APF algorithms, deep learning classification, and robust communication with a React + Three.js monitoring UI for precise swarm coordination.
- * To neutralize threats efficiently while ensuring resilience — the swarm adapts instantly if a drone is lost.

TECHNICAL SKILLS

Languages: Python, C++, SQL, REST APIs

Programming Frameworks: PyTorch, YOLOv8, Pandas, Flask, Tensorflow, Transfer Learning, CNNs

EDUCATION

D Y Patil University Ambi ,Pune

Computer Engineering

2022 – 2026

CGPA - 8.63