

Yogaprabhu Ramesh Kanna

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Robotics & AI/ML Candidate

Mechatronics engineer with a combined interest in **Machine Learning/AI, data science**, and **Robotics**. Hands-on experience spans underactuated system control (PID-stabilized quadcopter), operating a **robotic arm, UAV, and mobile robots using ROS and Gazebo**, and end-to-end **ML pipelines** (classification models deployed via Streamlit). **B.Tech in Mechatronics Engineering with Robotics specialization** from SRM Chennai, **M.Sc. in General Management** from **PFH Göttingen, Germany** and **Data Science certification** through IIT-M Pravartak (HCL GUVI). Open to opportunities spanning **Robotics Research, AI/ML, and Data Science**.

EDUCATION

Masters of Science in General Management

PFH Private Hochschule Göttingen

Göttingen, Germany • Apr 2023 - Aug 2025

- Relevant coursework: International Marketing, Industrial & Logistics Management, Strategic Management, Digital Business Models, Risk Management in Global Supply Chains, Corporate Governance
- Thesis: *Enabling a Sustainable Circular Economy through Industry 4.0: Innovations, Challenges, and Future Prospects*.
- Project works:
 - (i) Study of supply chain risk management in Toyota, Apple, and Unilever.
 - (ii) Study of the Evolution of Marketing
 - (iii) Diversity in Human Resource Management

Bachelor of Technology in Mechatronics Engineering with specialization in Robotics

SRM Institute of Science and Technology

Chennai, India • Jun 2018 - May 2022

- Relevant coursework: Robotics & Mechatronics, Embedded Systems, Control Systems, Machine Design, Power Electronics.
- Final-year project: *Design and Fabrication of Smart Helmet Designing* – focused on rider safety and embedded electronics.

SKILLS

- **Robotics & Control Systems:** Electrical Machines & Actuators, Embedded Systems & Microcontrollers (Arduino, PID & Feedback Control, Power Electronics & Drives, Raspberry Pi), Mechatronics & Robotics, Sensor Integration & Telemetry, System Dynamics & Kinematics
- **Robotics Software & Simulation:** Gazebo, MATLAB / Simulink, Proteus, ROS
- **AI / Machine Learning & Data Science:** Machine Learning & Deep Learning (classification, regression, neural networks), Model Evaluation (cross-validation, data-leakage detection), Power BI, Python (Pandas, NumPy, Scikit-learn, PyTorch, Keras), SQL, Statistical Analysis & Hypothesis Testing, Streamlit Deployment
- **Software & Tools:** AutoCAD / SolidWorks, C/C++, Git / GitHub, HTML/CSS, Java, MATLAB / Simulink, MySQL, Power BI, SAP ERP, TiDB
- **Languages:** English - C1 (Fluent), German - A2, Hindi - B1, Tamil - Native

PROJECTS

Police Traffic Stop Analysis

IIT-M Pravartak / HCL GUVI Capstone

- Built an interactive dashboard over a MySQL-backed traffic-stop dataset covering violation trends, demographics, and search rates.
- Runs live SQL queries for deeper analysis — top vehicles in DUI stops, arrest rates by age group, high-risk violation patterns.
- Live app: police-checkpost-logs-sybersage.streamlit.app
- GitHub: github.com/SyberSage/police_checkpost_logs

Employee Attrition Prediction

IIT-M Pravartak / HCL GUVI Capstone

- Compared four classifiers and selected Logistic Regression (AUC 0.82, recall 0.72 on the attrition class) for its strongest performance on the minority class.
- Identified and removed a data-leakage feature that was artificially inflating a second prediction target to a near-perfect score.
- Live app: employee-attrition-prediction-sybersage.streamlit.app
- GitHub: github.com/SyberSage/-Employee_Attrition_Prediction

Multi-Disease Prediction System

IIT-M Pravartak / HCL GUVI Capstone

- Built and compared classification models (Logistic Regression, Random Forest, XGBoost) to predict Parkinson's, chronic kidney disease, and liver disease from clinical data.
- Combined three independent, disease-specific pipelines into a single Streamlit application.
- Live app: multi-disease-prediction-sybersage.streamlit.app
- GitHub: github.com/SyberSage/Multi-Disease_Prediction

ChatGPT Reviews Sentiment Analysis

IIT-M Pravartak / HCL GUVI Capstone

- Built an NLP pipeline classifying app reviews as positive, neutral, or negative, comparing classical ML (Naive Bayes, Logistic Regression, SVM) against an LSTM model on TF-IDF text features.
- Used a leakage-safe train/test split at the unique-text level and documented the dataset's real limitations rather than overstating results.
- Live app: reviews-sentiment-analysis-sybersage.streamlit.app
- GitHub: github.com/SyberSage/Reviews_Sentiment_Analysis

Design and Fabrication of Smart Helmet Designing

SRM Institute of Science and Technology

- Developed a safety helmet integrated with embedded electronics for accident detection and rider protection.
- Utilized **Arduino, sensors, and wireless communication** to trigger emergency alerts.
- Improved safety response time by enabling automatic crash notification within seconds.

CNC Plotter

SRM Institute of Science and Technology

- Designed and programmed a **low-cost computer numerical control (CNC) plotter** using stepper motors and Arduino.
- Achieved high precision in plotting by implementing **G-code interpretation and motion control algorithms**.
- Applied **mechanical design principles and microcontroller programming** for automation.

UAV - Autonomous Quadcopter

Chennai, India

- Built a quadcopter prototype with **stability control systems** for autonomous flight.
- Applied **PID control, motor calibration, and wireless communication modules**.
- Strengthened expertise in **aerodynamics, system dynamics, and embedded systems**.

Robotic Arm, UAV & Mobile Robot Operation

SRM Institute of Science and Technology

- Operated and tested a robotic arm, a UAV, and mobile robot platforms as part of undergraduate robotics coursework.
- Used ROS and Gazebo for simulation, control, and validation of robot behavior prior to hardware testing.

COURSES

Data Science Program with IIT-M Pravartak Certification

Jan 2026 - May 2026

HCL GUVI

Robotics and Control: Theory & Practice

Jan 2021 - Mar 2021

NPTEL Repository

Introduction to Virtual Reality

University of London - Coursera

Jan 2021

VOLUNTEERING & LEADERSHIP

Erasmus Student Network (ESN)

Nov 2023 - Oct 2024

Student Buddy & Event Coordinator

Göttingen, Germany

- **Supported** incoming international students and **coordinated** monthly cultural and social events with a **volunteer** team.
- **Developed** strong communication and leadership skills through regular interaction with diverse student groups.

DSA - Directorate of Student Affairs

Jul 2018 - Mar 2020

Member

SRM Institute of Science and Technology

- **Organize and manage** various campus-wide **cultural and sports events**, including fests and inter-departmental competitions.
- Gained hands-on experience in **event planning, logistics, and student engagement**.

NSS - National Service Scheme

Jun 2018 - May 2019

Volunteer

SRM Institute of Science and Technology

- Participated in **community outreach, social awareness programs, and environmental initiatives**.