TALAVALASA SAI KUMAR

+91 7286813844 Email:saik62907@gmail.com
Kurmannapalem , Visakhapatnam , Andhra pradesh

ABOUT ME :

Tech-savvy and results-driven professional passionate about solving real-world problems through innovative solutions. Expertise in Python, C, C++, and Linux system management, with hands-on experience in software development, hardware integration, and machine learning. Known for adaptability, teamwork, and commitment to excellence.

KEY COMPETENCIES

Programming Languages	Hardware Expertise	Strong problem-solving
DSA	AI and Machine Learning	Effective communication skills
Operating Systems	Version Control	Ability to work both
Robotics and IoT	CV (Computer Vision)	independently and collaboratively

PROJECTS:

Water Chlorine Level Detection using Computer Vision & ML
(Intern at LSA Labs, IIIT-Hyderabad | April 2025 - July 2025)

- Developed an ML system to measure chlorine concentration in water using colorimetric analysis of OTO solution.
- Engineered color features (RGB/HSV histograms) from images and trained an XGBoost regression model to predict ppm values.
  Skills: Python, OpenCV, XGBoost, Data Augmentation, Statistical Analysis

Data Collection and ML Model for Autonomous Path Planning

- Collected ultrasonic sensor data (2000+ samples) to train a Decision Tree model for real-time obstacle avoidance.
  Skills: Python, Data Collection, Machine Learning, Hardware Integration.

InMoov Humanoid Robot

- Designed a robotic head with servo-controlled mouth movements integrated Google Text-to-Speech (gTTS) for voice assistance.
- Achieved real-time synchronization between voice output and servo motor movements.
  Skills: Python, OpenCV, Embedded Systems, 3D Printing.

EDUCATION & CERTIFICATIONS

Kakinada Institute of Engineering and Technology
Bachelor of Technology (B.Tech) in Artificial Intelligence & Data Science, 2023-27

Sri Chaitanya Junior College
High School (12th Grade), 2023

Nirmala E.M School
Schooling (10th Grade), 2021

EXTRACURRICULAR ACTIVITIES

Hackathons: Top 10 in Smart India Hackathon - 2023

Leadership: Head of AI Club Organized 5+ technical workshops

Open Source: Contributed to Arduino Computer Vision libraries