KRITHICK BALAJI RAMESH

Aerospace Engineering | Embedded Systems Development | IoT and Space Systems

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EDUCATION

B.Tech in Computer Science & Engineering

SRM Institute of Science & Technology

2021 – 2025 CGPA: 3.3/4

WORK EXPERIENCE & RESEARCH

Founder & CEO

N-Sky-On Mini Satellite and Space - Student Club

Present

- We launched a student-led platform that aimed to promote space activities, and developed prototypes for operations with mini-satellites.

Click the Link for Website

Research Engineer - Embedded Systems

SRM IST

Mar 2024 – Nov 2024 India

- Developed and designed an embedded prototype gas detection system using a customized PCB integrated with Arduino Uno and a Flutter app to achieve real-time sensor telemetry.
- Expertly applied this for residential and industrial safety purposes to realize gains leading to a Scopus-indexed publication on the design and performance of the system.

Click the Link for Demo Video

Rocket Propulsion - Project Based Intern

Dwello Aerospace

Feb 2025 – Mar 2025

- Designed and analyzed a variable rocket nozzle prototype, where essential parameters like exit velocity, mass flow rate, and expansion ratio were calculated using thermodynamics and fluid mechanics principles. Skills - Fusion 360 - 3d Modelling | Solid Engine,Liquid Engine

Click the Link for Project Report

Research Engineer - Embedded Systems

SRM IST

Jan 2025 – Apr 2025

- Designed and developed an embedded Smart IntelliSecure LPG and Fire Safety System over 5 months, integrating automatic door actuation and real-time hazard responses.

AI - Intern

Suvidha Mahila Mandal

Mar 2023 – Apr 2023

- Built and deployed ML models for text classification using NLP.
- Worked with Python, TensorFlow/PyTorch, Azure, and Streamlit.

PROJECTS

Suraj Narayana Mark-3

Mini Satellite for Monitoring Cosmic Radiation

Nov 2024 Working Prototype

- Developed a 700g pico-satellite prototype to monitor cosmic radiation.
- Creation of AI-based anomaly identification using machine learning models and deployment of telemetry data visualization via a custom Streamlit web application.
- Implemented software-defined radio (SDR) for efficient satellite communication, where it stores GPSTrack, radiation, and atmospheric telemetry data. Click the Link

SKILLS

Python | FreeRTOS | Embedded C | G-Firebase | Microsoft Azure | React-Js | Satellite Systems | Fusion 360-3d Models | Basic Rocket Engines (Solid & Liquid) | Mini Satellite Designing, Development

ACHIEVEMENT

Special Prize–Expo 2025 Best Satellite: Suraj Narayana Mark 3

SRM IST Chennai

Click the Link

PUBLICATIONS

IoT-Enabled LPG Leakage Monitoring with Arduino Uno, ESP32, and Real-Time Mobile Alerts via Flutter

SSRN (Scopus Indexed)

ICOFE 2024

Click the Link

Drone-Based Aerial Surveillance and Real-Time Hazardous Gas Detection

IEEE Conference

ICMCSI 2025

Click the Link