SANNUT NICHOLAS J

UAV System Engineer

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ABOUT ME

Hi, I'm Sannut Nicholas, a Mechanical Engineering student passionate about advancing next-generation drones, UAVs, and autonomous systems. I specialize in designing, building, and programming custom aerial platforms for surveillance, rescue, and industrial applications. With hands-on experience in flight controllers, CAD design, and real-world projects, I combine technical expertise with creativity to develop reliable and innovative UAV solutions for modern engineering challenges.

EDUCATION

2022 - 2026

Sri Eshwar College of Engineerinng

BE Mechanical Engineering

Pursuing BE in Mechanical Engineering (2022–2026) with hands-on expertise in UAV design, robotics, and automation, skilled in flight controllers, CAD tools, and real-world drone applications through projects and internships.

2021 - 2022

Nirmala Matha Convent Matric Hr Sec School

HSC - Higher Secondary Certification

I completed my Higher Secondary Education at Nirmala Matha Convent Matric Hr Sec School with 65%, specializing in Physics, Chemistry, and Mathematics. This phase built a strong academic foundation and nurtured my interest in pursuing Mechanical Engineering .

2019 - 2020

Nirmala Matha Convent Matric Hr Sec School

SSLC - Senior Secondary Leaving Examination

I completed my Secondary School Education at Nirmala Matha Convent Matric Hr Sec School with 71%. With a focus on Science and Mathematics, this stage enhanced my problem-solving skills and developed my early passion for technology and engineering applications.

EXPERIENCE

2023 - 2025

Sri Eshwar Drone Tech Pvt Ltd

UAV System Engineer

I gained practical industry exposure through an internship at Sri Eshwar Drone Tech Pvt Ltd (2025), where I developed and configured drones using Pixhawk and DJI Naza-M Lite flight controllers. My role involved handling assembly, calibration, autonomous flight programming, and documenting processes for safety compliance. I also gained knowledge in basic fixed-wing programming and troubleshooting flight control systems.

SKILLS

- DGCA Drone Pilot
- UAV Design
- Drone Design
- FPV Pilot
- Drone Testing

Modelling and CAD

- Hardware Integration

PROJECT

SURVEILLANCE USING VTOL (ongoing) **2025**

Designed a VTOL UAV for real-time surveillance using high-resolution sensors and cameras. It supports vertical takeoff, long flight time, and reliable monitoring in diverse terrains.

Tech Stack: Pixhawk Flight Controller, ESC, Camera Module, GPS, Mission Planner

AUTONOMOUS FIXED WING 2025

Developed an autonomous fixed-wing UAV with stable flight control for long-range aerial monitoring.
Integrated real-time video transmission and telemetry-based navigation.
Tech Stack: Pulsar LED Motor, Ready to Sky ESC, SpeedyBee Wing FC, Servos, ELRS, FPV Camera & VTX, Micro Air Telemetry.

DUAL-DRONE AUTONOMOUS SYSTEM FOR RESCUE AND FIRST-AID 2025

Designed and developed a dual-drone system for disaster management with real-time survivor detection and aerial first-aid delivery using thermal imaging, autonomous navigation, and payload drop mechanism.
Tech Stack: T-Motor Antigravity 340KV, T-Motor Air ESC, RTX Base, Here 4 GPS, Tarot Frame, Pixhawk Cube, Skydroid H12 Pro, Thermal Camera, Telemetry

CUSTOM DRONE WITH 1.5 kg PAYLOAD CAPACITY 2025

Developed a custom UAV capable of lifting 1.5 kg payload for research and industrial use.
Integrated Pixhawk 2.4.8 with GPS and remote for precise flight control.
Tech Stack: 750KV Motor, T-Motor ESC, Pixhawk 2.4.8, M10 GPS, T12 Remote, 4S 9500mAh LiPo, Camera.

LONG RANGE FPV DRONE 2025

Built a custom long-range FPV drone designed for endurance and reliable night operations.
Integrated Goku F7 FC with Mamba ESC and OTA receiver for stable flight and communication.
Tech Stack: Mark 4 10” Frame, Goku F7 FC, Mamba 80A ESC, Transis R9MM OTA, SpeedyBee TX800 VTX, Foxeer Night-Vision Camera.

HEAVY LIFTER DRONE WITH PAYLOAD 7 kg 2025

Designed a heavy-lift UAV optimized for industrial and research applications with high thrust efficiency.
Integrated Pixhawk Cube with Here 4 GPS and Skydroid H12 for precise control.
Tech Stack: Tarot X4 Frame, T-Motor 340KV Motors, T-Motor Alpha 60A ESCs, Pixhawk Cube, Here 4 GPS, Skydroid H12 Remote.

TRAINER RC PLANE 2024

Built a lightweight trainer RC plane using coroplast sheet for structural design. Powered by a 1000KV motor with SimonK 30A ESC and 1500mAh 3S battery, integrating 3 servos for stable control and maneuverability.
Tech Stack: Coroplast Sheet, 1000KV Motor, SimonK 30A ESC, 1500mAh 3S LiPo, 3 Servos and Fs -i6 Tx and Rx.

5 INCH FPV DRONE 2024

Designed and built a high-speed FPV racing drone using Apex 5” frame with Emax ECO II motors.
Integrated SpeedyBee F7 stack, camera, VTX, and ELRS for stable, low-latency performance.
Tech Stack: Apex 5” Frame, Emax ECO II 1950KV, SpeedyBee F7 Stack, 60A 4-in-1 ESC, Runcam Phoenix 2 SE, Rush Tank Ultimate VTX, ELRS.

SMART GLASS CLEANING ROBOT 2023

Led a team to secure 6th place in the Smart India Hackathon with a smart glass cleaning robot.
Enhanced skills in robotics, 3D modeling, problem-solving, and project management.
Tech Stack: Autodesk Fusion 360.

AUTOMATED SMART DISPATCH SYSTEM USING DRONE 2023

Designed an automated smart dispatch drone system using a custom aluminum frame with optimized ESC and firmware configuration. Enhanced delivery precision, reliability, and automation in logistics applications.
Tech Stack: Pixhawk FC, ESC, GPS, Telemetry, Gripper Mechanism, Mission Planner.

EXPERTISE

Flight controller: KK 2.1.5, Pixhawk Cube Orange Plus, Pixhawk 2.4.8, K++, Speedybee F407, F7, Wing, Goku F722, CrossFlight, Dji Naza M Lite, Rush Core F4, Knowledge in working with all types of Flight controllers(Arudupiiilot, Betaflight, etc).

Software: Mission Planner, Pix 4, Arudupilot, Jivi, Betaflight, Cleanflight, INAV, QGround Controller, TBS Tango, Open TX, Edge TX.

Design: AutoCAD, SolidWorks, SolidEdge, Fusion 360, Creo, ZW CAD.