Raghavendra Jetti

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AgTech • UAV/UGV & Agricultural Robotics • Software & Data Analytics

SUMMARY

FAA Part 107 certified AgTech professional with hands-on experience in UAV-based aerial mapping, precision field operations, and agricultural robotics deployment. Strong software and data foundation (Python, C++, data modeling) with field execution across research trials and agribusiness. Seeking roles in UAV operations, agricultural robotics, and autonomy-enabled crop monitoring workflows.

TECHNICAL SKILLS

UAV: PX4, ArduPilot, Mission Planner, QGroundControl, SITL; calibration, failsafes, waypoint missions
Robotics: ROS 2; state machines; perception control loops; sensor integration
Embedded: Raspberry Pi, Arduino, Cube Orange; GPIO/PWM, motor/ESC control, wiring/power basics
Programming: Python, C++ (basic); scripting, debugging, logging
Vision & Data: OpenCV (basic), Power BI, Excel; data cleaning, dashboards
Tools: Linux/Ubuntu, Git/GitHub, VS Code; documentation, field data logging

PROFESSIONAL EXPERIENCE

Research Technician   **Sep 2025 – Present**
University of Nebraska–Lincoln (MAARS Lab) — Lincoln, NE

- Conduct lab and field research supporting crop improvement and sustainability trials; maintain accurate experimental records.
- Operate UAVs for aerial mapping and crop monitoring; capture field datasets and support downstream analysis workflows.
- Support agricultural robotics systems for automated planting/phenotyping tasks; assist calibration and field deployment.
- Operate tractors and GPS-equipped machinery for plot preparation and repeatable precision field operations.
- Collect soil, plant, and environmental measurements; contribute to data-driven recommendations and reporting.

Field Assistant / Data Analyst   **Jan 2020 – Dec 2022**
Reo Agri Science Pvt. Ltd. — Andhra Pradesh, India

- Built and maintained Power BI dashboards to track performance metrics and improve operational reporting.
- Performed data cleaning, modeling, and analysis to support decision-making across agribusiness workflows.

- Collaborated with stakeholders to translate requirements into clear visualizations and insights.

- Field Assistant with hands-on experience in agricultural research and crop management. Skilled in conducting field trials, collecting and recording data, monitoring crop growth, and assisting with soil and plant sampling.

Agriculture Technician (Intern)   Dec 2019 – Mar 2020
ShivaShakti Bio Technologies Ltd — Hyderabad, India

- Assisted with crop management, soil analysis, pest monitoring, and irrigation support across farm operations.
- Contributed to field data collection and assessments used for improving yield and efficiency.

Area Business Development Manager (Founder-led Agri Inputs)   Jul 2017 – Dec 2022
Narasimha Pesticides and Fertilizers — Guntur, India
- Led farmer engagement and training, supported adoption of modern inputs and best practices.
- Managed sales strategy, distribution, and customer support across assigned territory.
- Coordinated with vendors and product teams to ensure timely delivery and correct product usage.

RAWE Intern (Rural Agricultural Work Experience)   Aug 2019 – Nov 2019
ICAR — Hyderabad, India
- Worked with farmers on cultivation, pest management, soil analysis, and sustainable practices.
- Completed field surveys and data collection; strengthened extension and rural development skills.

SELECTED PROJECTS

Autonomous UAV Flying (PX4/ArduPilot + ROS 2)   2025 – Present
Personal/Academic Projects
- Developing autonomous mission workflows (takeoff, waypoint navigation, RTL) using Mission Planner/QGroundControl and SITL simulations.
- Building ROS 2 + Python control loops to connect perception → decision → flight commands; focusing on safe state machines and failsafes.
- Experimenting with companion-computer integration (Raspberry Pi) for telemetry, logging, and autonomy extensions.

Manure Handling Robot (Cube Orange Flight Controller Prototype)   2025 – Present
Agricultural Robotics Prototype
- Building a manure collection/transport UGV prototype using a Cube Orange flight controller for robust IMU/GPS integration and control.
- Designing safety-first locomotion and payload handling; iterating on chassis layout, traction, washdown readiness, and power budgeting.
- Integrating motor control and sensor inputs (ultrasonic/LiDAR options) for obstacle avoidance and indoor navigation.

Weed Locator (Computer Vision + Field Mapping) 2025 – Present

Precision Ag / Vision Project

- Building a weed detection pipeline for field imagery; preparing datasets, training baseline models, and evaluating precision/recall.
- Planning geo-referenced weed maps from UAV imagery to support spot-spraying or mechanical intervention workflows.   Automating scouting outputs (CSV + map overlays) for decision support.

Alternative Cover Crop Termination (ACCT) Sep 2025 – Present

University of Nebraska–Lincoln

- Research non-herbicidal, non-tillage cover-crop termination approaches to improve soil health and reduce environmental impact.
- Run bench tests and field trials on physical methods (UV-C, heating/flaming, electrocution) with safe, repeatable protocols.
- Document results and iterate on procedures to support scalable AgTech workflows.

EDUCATION

M.S., Information Technology Management 2023 – 2024

St. Francis College — Brooklyn, NY   GPA: 3.5/4.0

Relevant coursework: Business Analytics, Data Modeling, C++ Programming, Database Management, Digital Transformation.

B.S., Agriculture 2016 – 2020

Singhania University — Rajasthan, India   CGPA: 7.37/10

Focus: Crop Production, Soil Science, Pest Management, Plant Breeding, Agricultural Economics, Extension Education.

CERTIFICATIONS

- FAA Part 107 Remote Pilot Certification (2025)

- Precision Agriculture & GPS Machinery Training

- PX4 Autopilot Training Certificate