

# VYOMSTEM

POWERED BY

**KIDI** / **ROBOTICS**



The Complete **STEM Drone Lab Solution**  
Igniting Curiosity. Building Futures.

# NEED FOR AERIAL STEM LABS

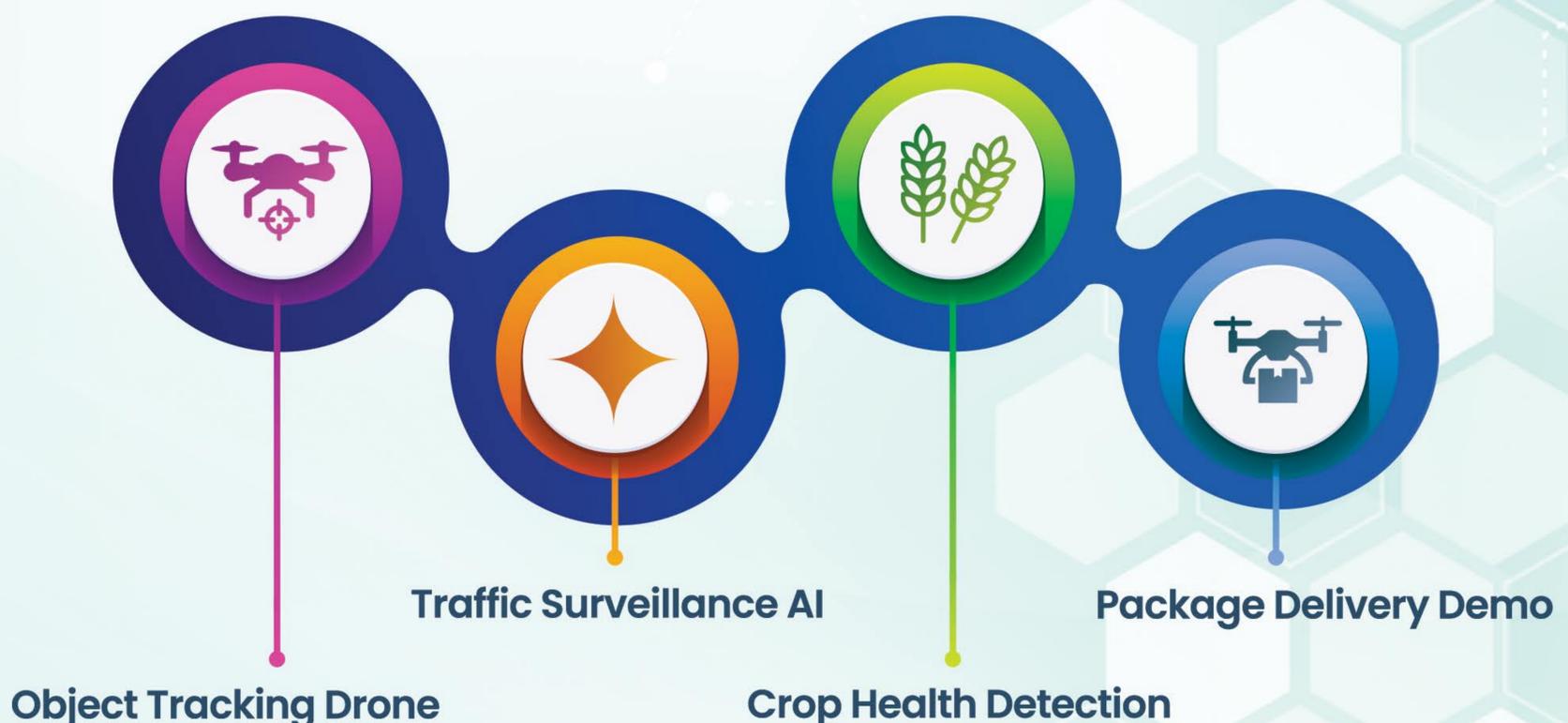
Drones are more than flying machines – they are platforms for real-world learning in physics, mathematics, computer science, electronics, and environmental studies.

## DRONE/UAV LAB SETUP IS DESIGNED TO:

- ✓ Spark creativity and problem-solving skills
- ✓ Promote interdisciplinary STEM learning
- ✓ Provide hands-on exposure to next-gen technologies

Aligned with NEP 2020 and Atal Tinkering Labs (ATL) goals, this initiative is ideal for schools (6+2 system) and colleges, fostering skill development and innovation.

## Capstone Projects



# WHAT'S INSIDE A STEM DRONE LAB?



## Core Lab Infrastructure

- Drone Kits (As per budget tier)
- Modular Indoor Flying Arena
- Drone Assembly Tools & Workstations
- FPV Goggles & RC Controllers
- Flight Simulators
- Sensor Modules: GPS, IR, Ultrasonic, LiDAR (Advanced)
- Safety Enclosures & First Aid Kit



## Software & Curriculum

- Mission planning & flight training software
- AI-based vision and object tracking modules
- Coding environments: Arduino IDE, Scratch, Python
- NEP-aligned STEM Curriculum & Activity Booklets

## Structured Learning Pathways

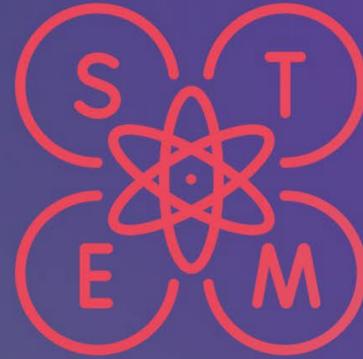
Level	Focus Area	Outcomes
Beginner	Drone fundamentals, safety, flight basics	Understand drone physics, coding & piloting
Intermediate	DIY drone assembly, sensors, coding with Arduino	Build drones, program autonomous behavior
Advanced	Aerial mapping, AI/ML, computer vision	Real-world project deployment, AI drone missions

# BUDGET OPTIONS\*

## BASED ON ENGAGEMENT

### TIER 1 – Foundation STEM Lab

- 5–6 Mini Drones (RTF – Ready to Fly)
- 2 DIY Drone Kits
- Flight simulator software
- STEM curriculum (Level 1)
- Basic toolkit & safety gear
- Faculty training (1 day)

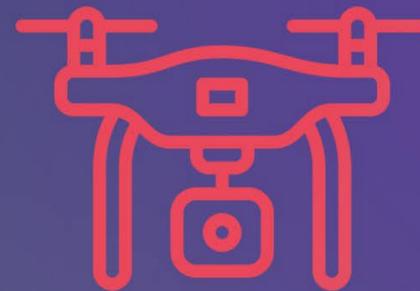


BEGINNER-LEVEL EXPOSURE

**30–50 STUDENTS**

### TIER 2 – Innovation Drone Lab

- 6 DIY Drone Kits + 4 RTF drones
- Indoor flight zone.
- Simulation & planning software
- Basic sensor integration kits
- Python/Arduino-based coding curriculum
- Drone Design Challenge Toolkit
- Faculty & student workshops (2 days)
- 3D printing support (Optional)

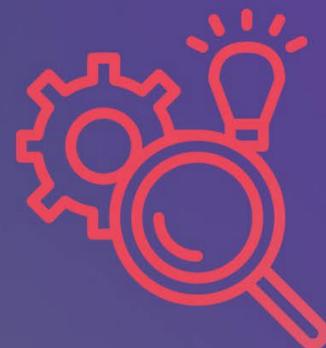


FOCUS ON HANDS ON + INNOVATION

**60–100 STUDENTS**

### TIER 3 – Advanced R&D Lab

- 10+ DIY Drone Kits, 6 RTF drones, 2 FPV drones
- AI vision drones with camera modules
- LiDAR, GPS, and thermal sensor kits
- Fixed-wing + quadrotor options
- Dedicated simulation lab (10 PCs)
- AI-based object detection & mapping projects
- Drone arena with obstacle course
- Curriculum (Levels 1–3), certification-ready
- 5-day Training-of-Trainers program



ADVANCED STEM + AI/ML INTEGRATION

**100+ STUDENTS**

\*Subject to number of items as required

# REAL-WORLD APPLICATIONS FOR STUDENTS

**1**

## DIY DRONE DEVELOPMENT

Starting from scratch, the process includes designing, calibrating, assembling, and preparing your drone for a ready-to-fly (RTF) launch.

**2**

## SMART AGRICULTURE

Help farmers monitor crops, manage fields, and improve agricultural efficiency.

**3**

## SURVEYING & MAPPING

Capture aerial images and generate accurate maps for land development and planning.

**4**

## DISASTER RELIEF SIMULATION

Assist in training and simulating emergency response scenarios for disaster management.

**5**

## INDUSTRIAL AUTOMATION

Inspect and monitor industrial sites, enhancing safety and operational efficiency.

**6**

## LOGISTICS & DELIVERY MODELS

Utilized for transporting goods and medical supplies, especially to hard-to-reach areas.

**7**

## ENVIRONMENTAL MONITORING

Observe and collect data on ecosystems, wildlife, and environmental changes.

Students don't just learn STEM – they apply it to solve real world challenges.

# VALUE-ADDED SERVICES

**FACULTY DEVELOPMENT PROGRAMS**



**NATIONAL HACKATHONS  
& COMPETITIONS**



**NSDC & DGCA  
CERTIFICATION SUPPORT**



**INTEGRATION WITH  
ATL, PM SHRI, STEM MISSIONS**



**AMC & DRONE  
REPAIR SERVICES**



**ANNUAL PERFORMANCE  
ANALYTICS REPORT**



Empowering Young Minds Through **Aerial Innovation**

# Our Products & Services

## VyomQuad

Go-to option for all sorts of UAV needs  
Payload capacity upto 3 KG

5G Ready



## VyomHexa

Suitable for Heavy Payloads  
Smart Agriculture

5G Ready



## VyomIndoor

Autonomous Indoor Inspection drone

5G Ready



## Fixed Wing

Suitable for long endurance

5G Ready



Telemetry  
Player

Capture, Store & Analyse –  
Flight Data Visualisation

50+  
DGCA Certified  
pilots  
10+  
RPTO  
Empanalled

Certified Pilots &  
Training Partners

VyomGCS

Drone Management  
Platform

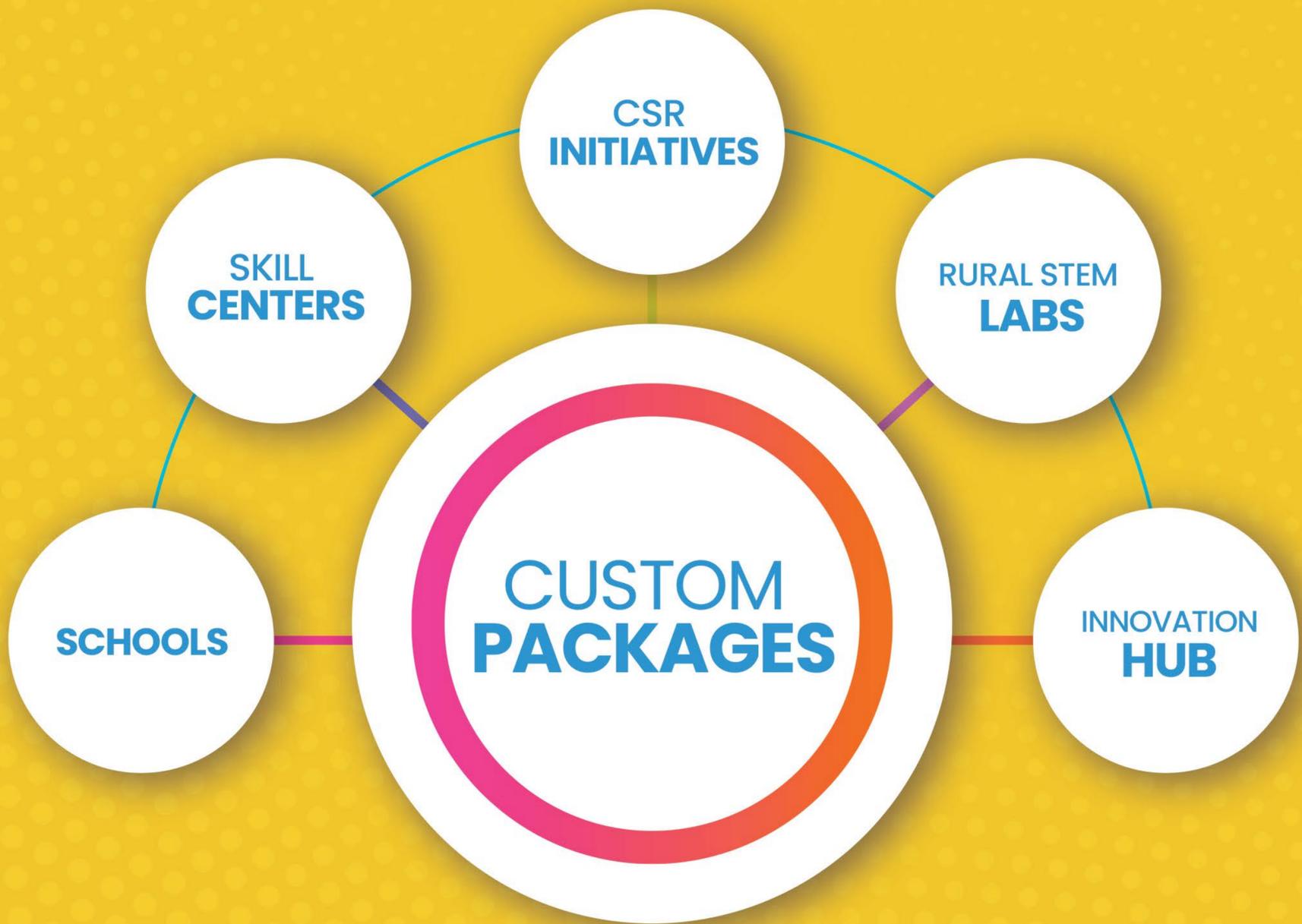
VYOM AI Analytic

AI Insights – Advanced  
Data Processing & Analysis

Trusted by



# Let's Co-create the Next Generation of Innovators



Ask for a **FREE DEMO** or **CONSULTATION** Today!

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