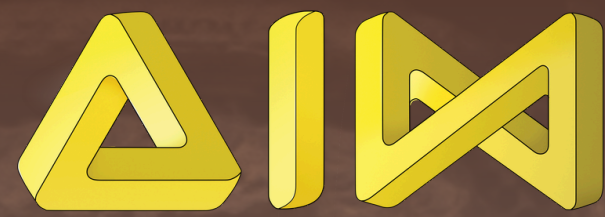




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GRASSROOT INNOVATORS OF ODISHA

Celebrating Odisha's Spirit of Ingenuity



Preface



Dear Change Makers,

On the occasion of Utkal Divas, it gives me immense pride to present “Grassroot Innovators of Odisha”—celebrating Odisha’s spirit of ingenuity.

This booklet brings together a diverse set of innovators—from young tinkerers at the school level to student innovators and emerging entrepreneurs—each solving real-world challenges through practical and impactful ideas. From grassroots solutions to scalable innovations, these efforts reflect how creativity and problem-solving thrive across every stage of the innovation journey.

What truly stands out is the intent behind these innovations—addressing local challenges, improving everyday lives, and contributing to a more sustainable future.

At AIC-Nalanda, we remain committed to nurturing such talent by providing the right platforms, guidance, & opportunities to help these ideas grow & create meaningful impact.

I congratulate all the 12 innovators featured in this booklet for embodying the true spirit of innovation.

Let us continue to celebrate and strengthen Odisha’s culture of ingenuity.

A handwritten signature in black ink, appearing to read 'D. Prasad Gouda'. The signature is stylized and fluid.

Durga Prasad Gouda
CEO, AIC-Nalanda

Plantery

Founder: Abhishek Mohapatra



Planetary is a clean-tech startup developing innovative plant-based batteries using grass and organic materials. These batteries are rechargeable, biodegradable, non-toxic, and designed for low-power applications. By reducing chemical waste, mining dependency, and environmental damage, Planetary offers a sustainable, cost-effective energy solution using agricultural waste and renewable energy integration.

Entrepreneurs



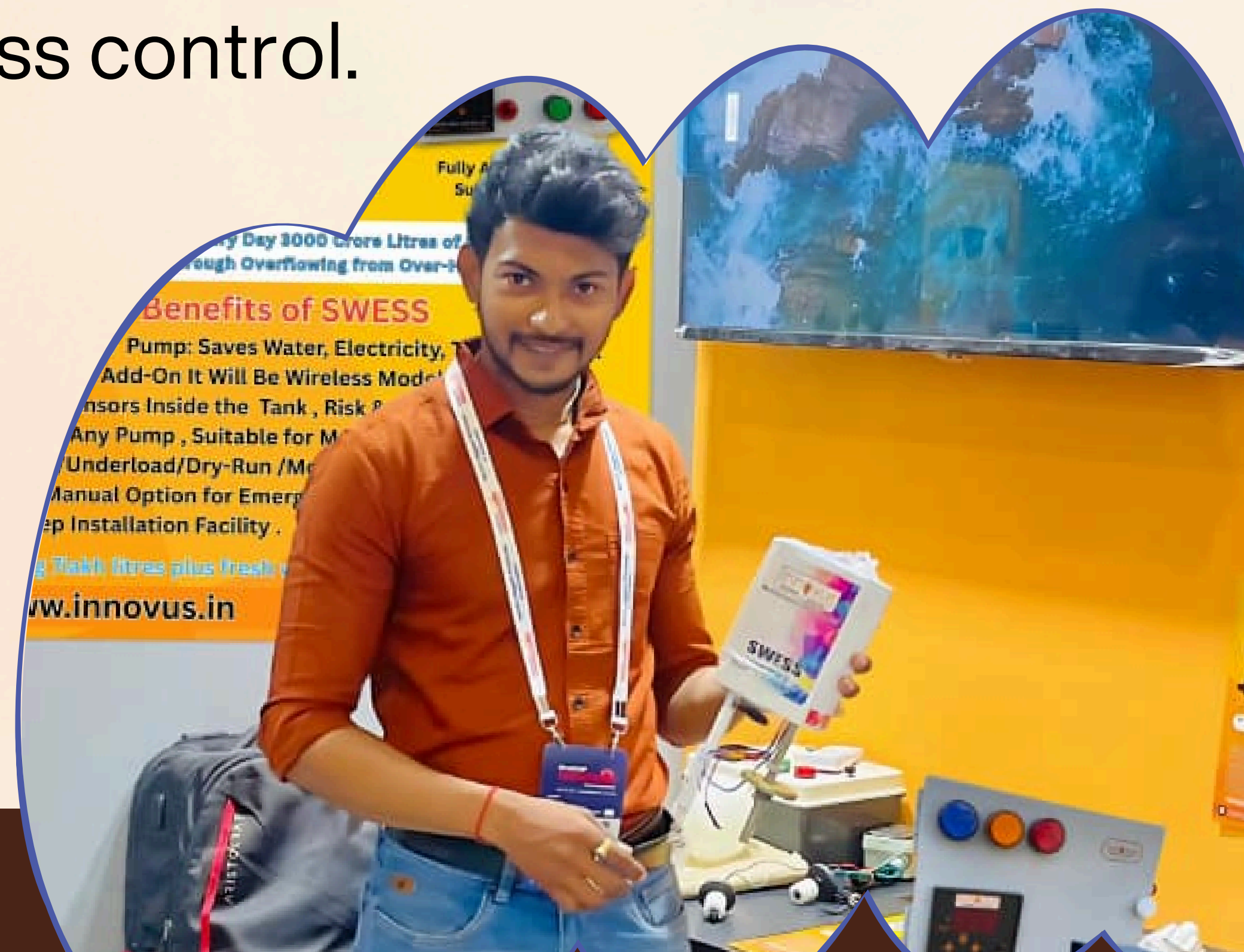
Innovus Hub

Founder: Srikumar Satpathy



Innovus is improving water conservation through innovative smart devices that save water, energy, time, and cost while reducing carbon emissions. Its solution prevents water tank overflows by automating pumps without electricity use, ensuring safety, durability, and zero maintenance, with options for monitoring and wireless control.

Entrepreneurs



Urban-Hyphae

Founder: Adhiraj Mohapatra



Urban-Hyphae is a startup addressing two major environmental challenges: agricultural waste management and hazards in the leather industry. It offers sustainable solutions to reduce crop waste burning and promote safer, eco-friendly leather practices, helping improve air quality, soil health, and worker safety for a more sustainable future.

Entrepreneurs



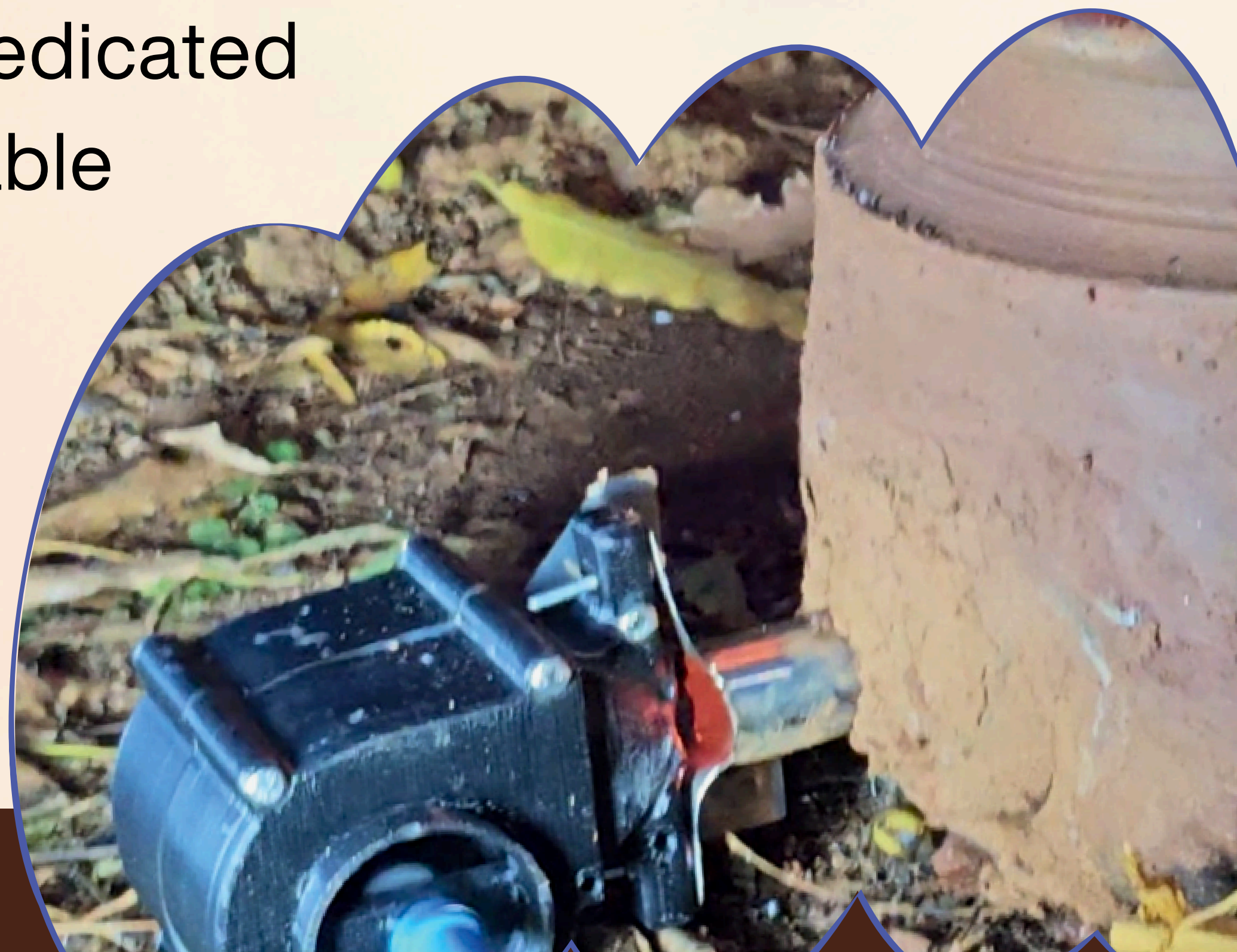
Newrup

Founder: Anup Paikaray



Newrup, founded in 2022, emerged from insights on indoor air pollution in rural areas. It identified key barriers to LPG adoption and developed an innovative, affordable, and user-friendly alternative that aligns with existing cooking habits while reducing carbon emissions, growing from a two-member initiative into a dedicated team focused on sustainable impact.

Entrepreneurs



Jaywing

Founder: Jayabeer Sutar



Jaywing Technologies is a deep-tech R&D startup from Odisha specializing in advanced UAVs and autonomous robotics for defense and research. From delivering heavy-payload drones and training to the Indian Army to building MineGuard systems, it bridges innovation and deployment while nurturing grassroots talent and strengthening India's drone ecosystem.

Entrepreneurs

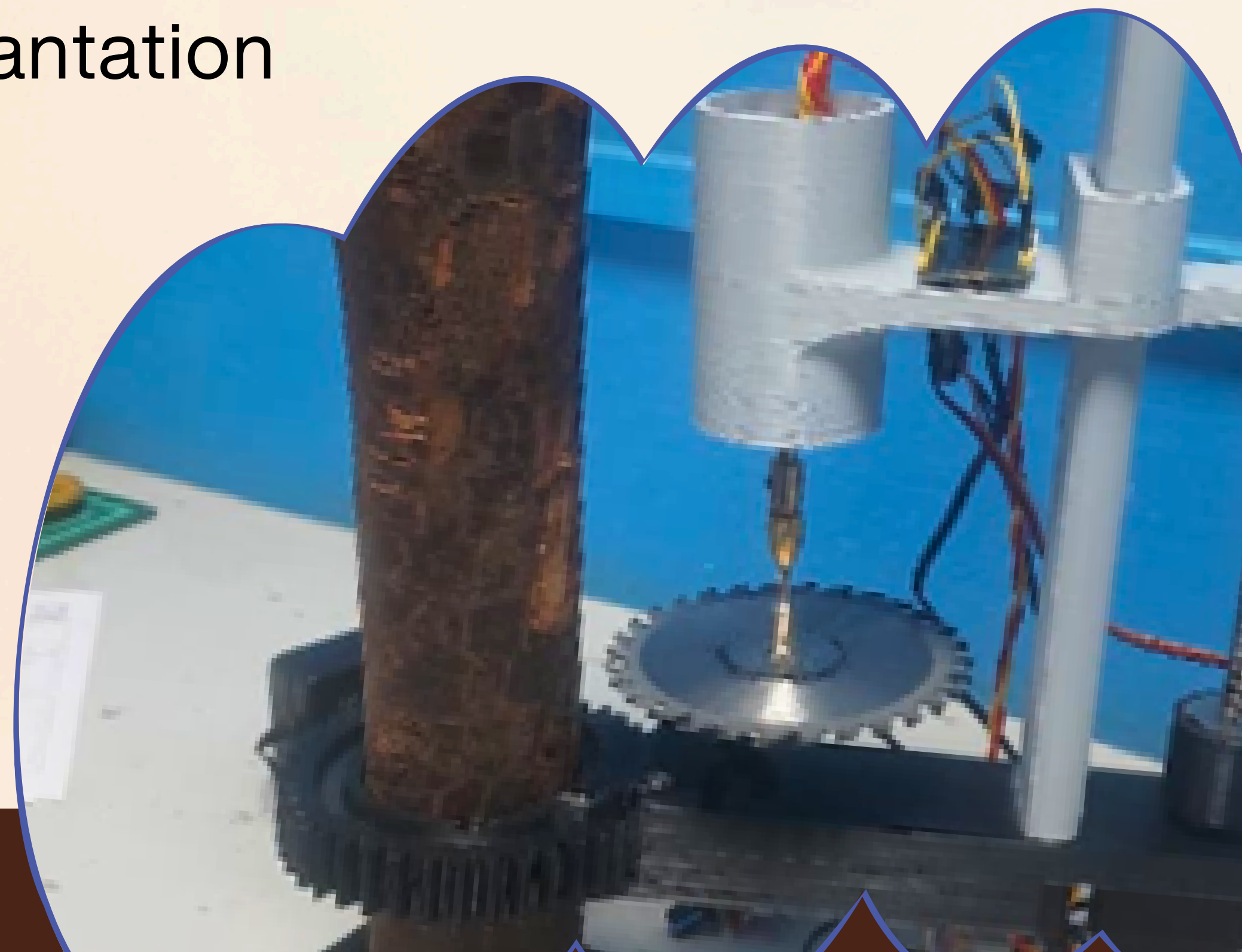


ART

Team Lead: Anustup Satapathy
DAV Public School, Pokhariput, Bhubaneswar

A low-cost automated rubber tapping device addresses labour shortages and improves productivity. It makes precise bark incisions for consistent yield and is integrated with an IoT-enabled latex collection system for real-time monitoring, reducing dependency on skilled labour and improving efficiency in plantation management.

#Tinkerers



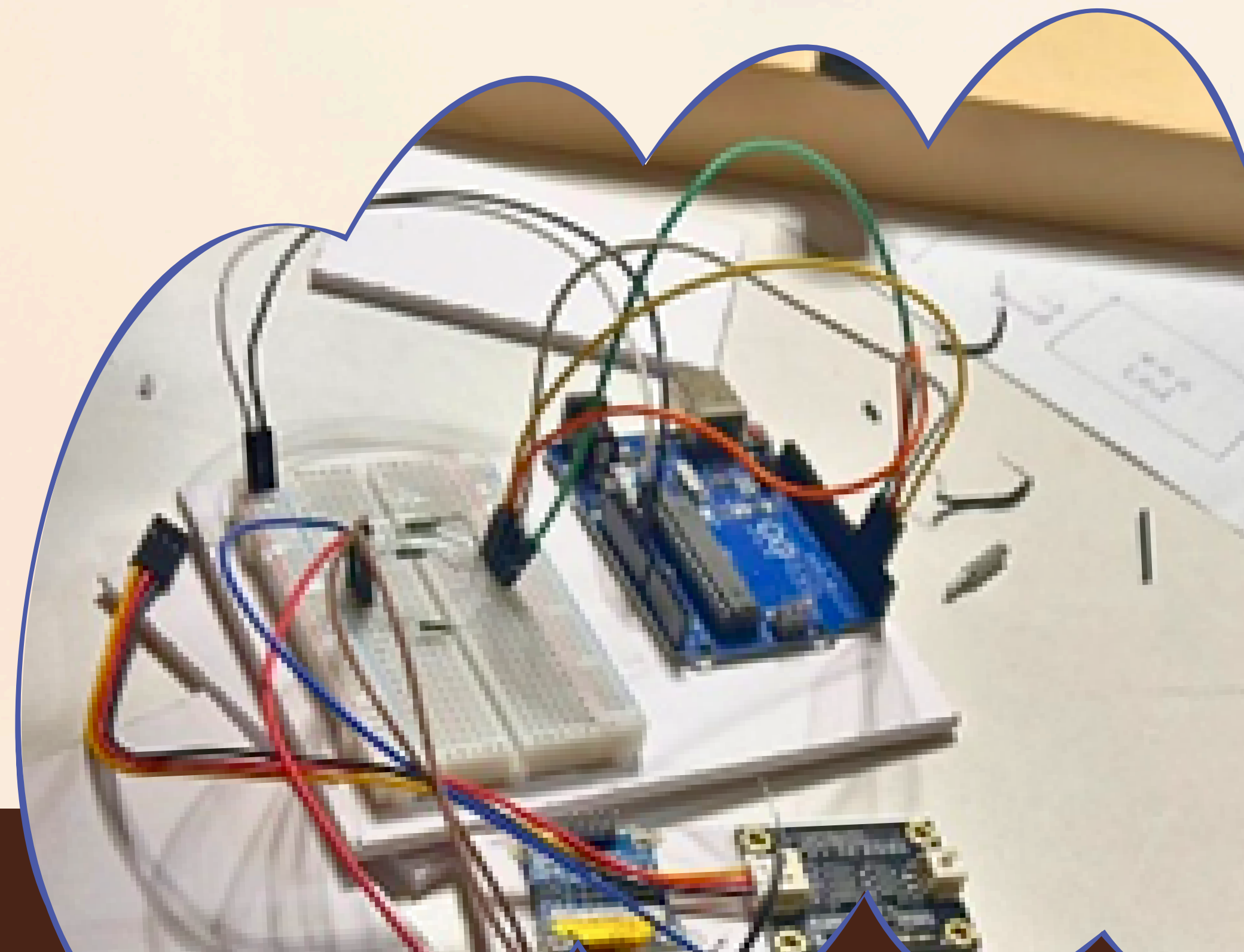
AquaSense

Team Lead: Anupam Rath

DAV Public School, Pokhariput, Bhubaneswar

Aqusense is a low-cost, portable solution for assessing water quality based on chemical and physical properties. It monitors pH, TDS, turbidity, and temperature using sensors with an Arduino Uno, providing real-time feedback through color-coded LEDs to enable easy understanding and support safe water usage.

#Tinkerers



Biora

Team Lead: Ayushman Panda

Buxi Jagabandhu English Medium School-2, Satyabhamapur, Bhubaneswar

This idea introduces a cost-effective, biodegradable alternative to conventional plastics made from waste rice and potato peels. It offers similar strength and water resistance with an 8–9 month shelf life and degrades in 1–2 months, converting organic waste into sustainable material and reducing environmental impact.

#Tinkerers



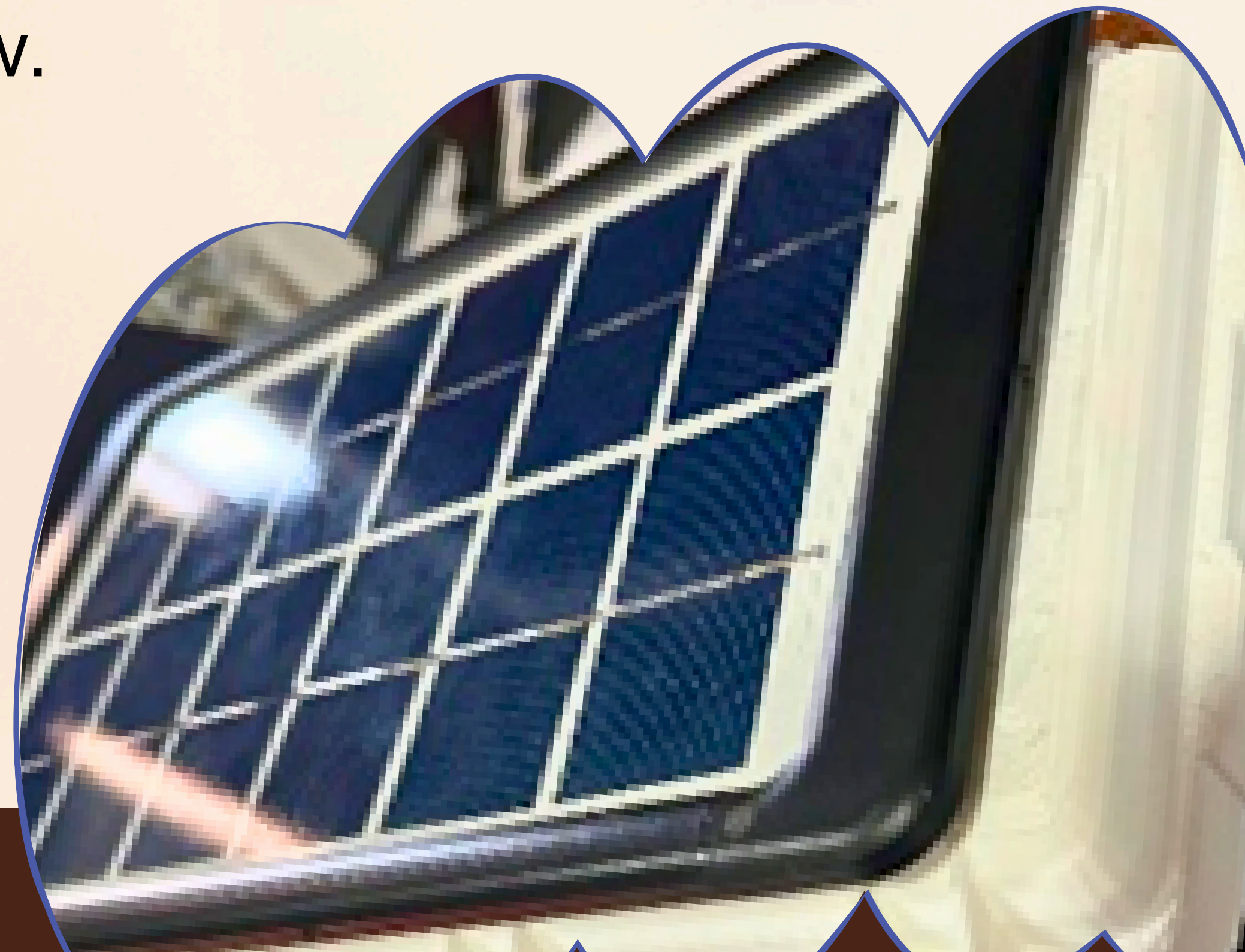
Empower

Team Lead: Devyansha Nanda

Buxi Jagabandhu English Medium School-2, Satyabhamapur, Bhubaneswar

This team introduces a portable hybrid (solar-powered) power-tool toolbox for carpentry work in areas with unreliable electricity. Designed like a briefcase with movable wheels, it powers tools such as drills, saws, and grinders during outages, reducing dependency on grid electricity and improving productivity and workflow.

#Tinkerers

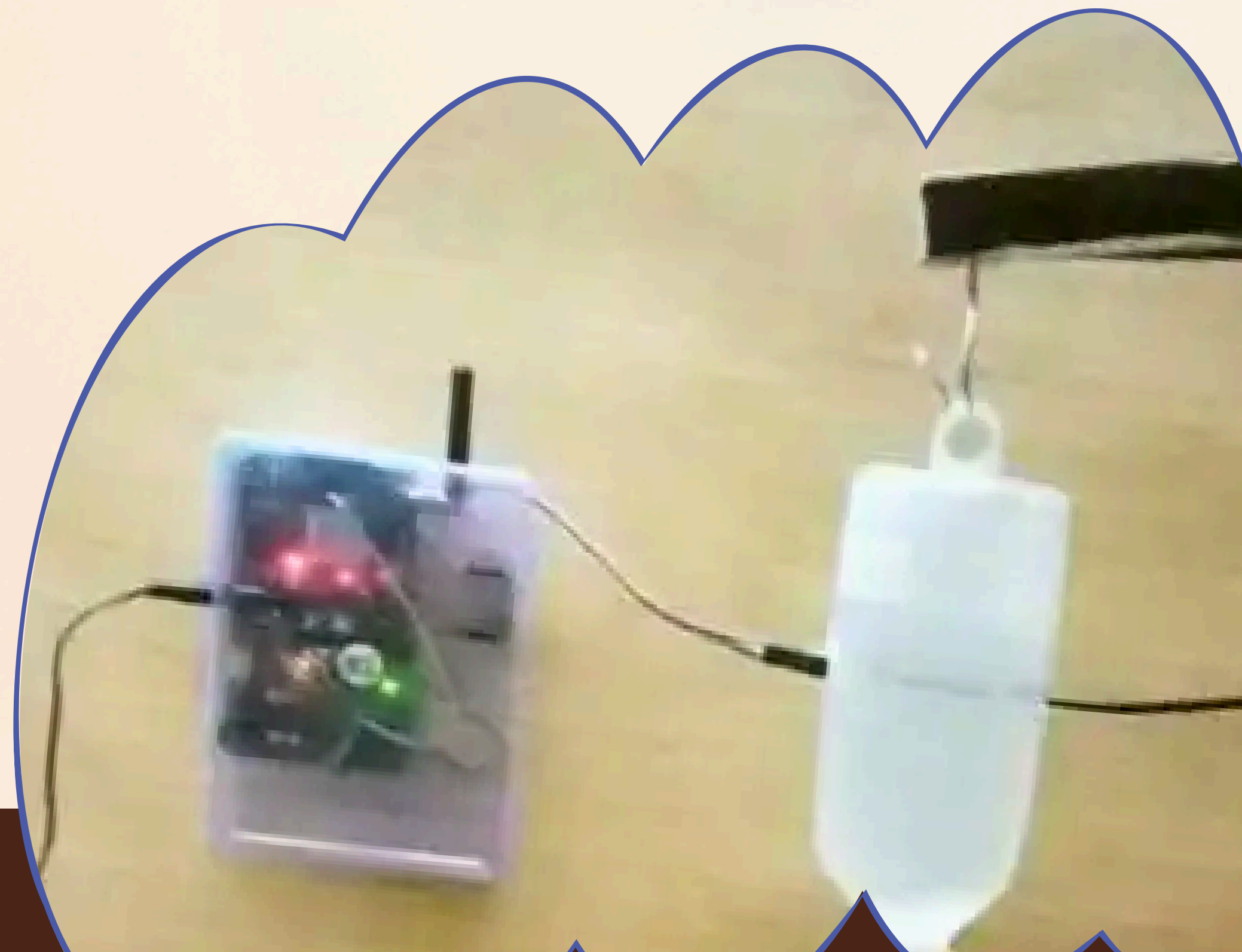


Shining Star

Team Lead: Pradyumna Kumar Muni
Sri G. J. High School, Sikula, Ganjam

The team is developing a smart glucose stand with weight-based sensors to monitor fluid levels in real time. It alerts healthcare staff as the drip nears depletion, reducing manual monitoring, ensuring timely replacement, and improving patient safety and care efficiency.

#Tinkerers



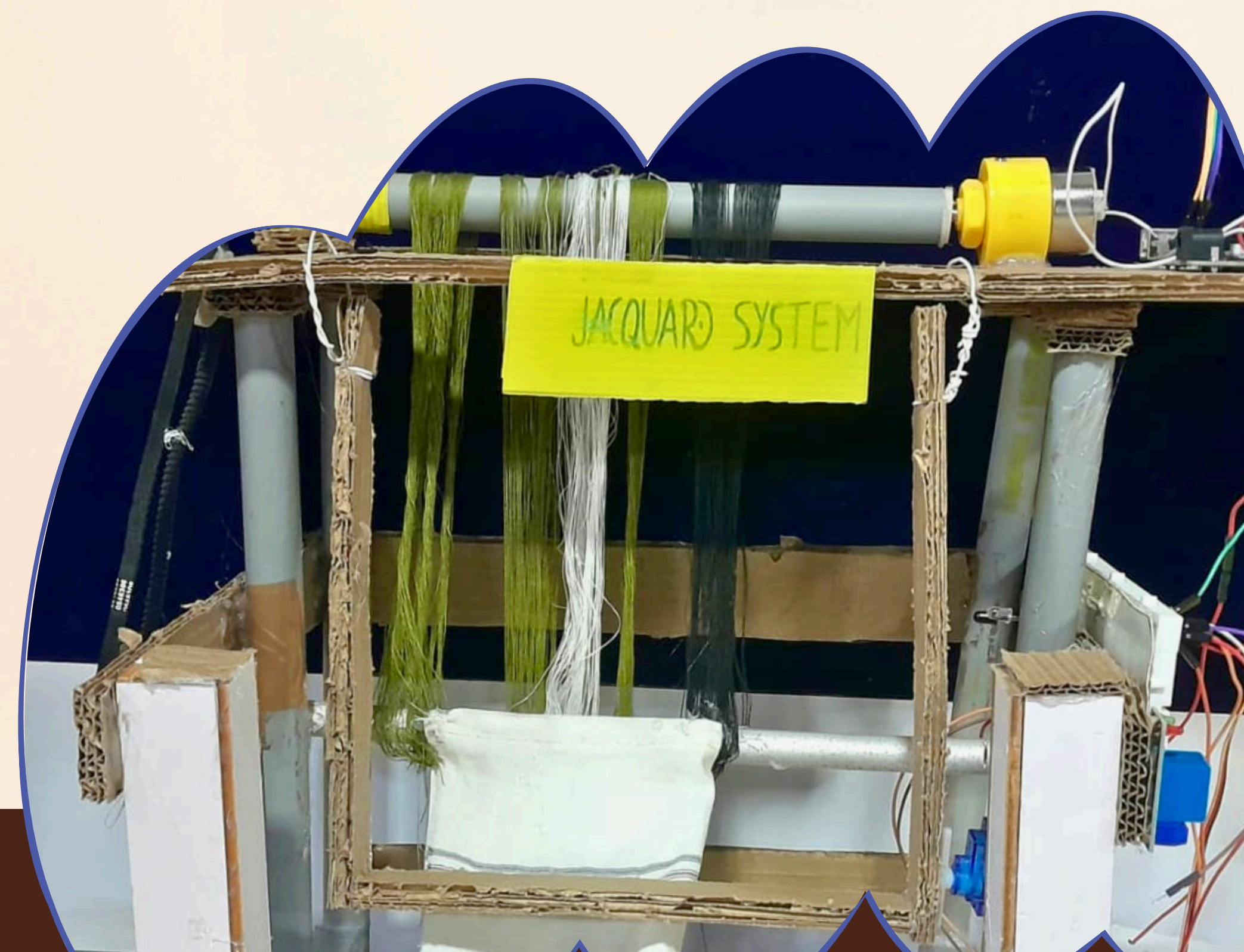
Smart Handloom Machine

Team Lead: Karan Kalyan Sahoo

Nalanda Institute of Technology, Bhubaneswar

The team is working on a smart handloom machine that enhances traditional weaving by integrating sensors, microcontrollers, and automation. It reduces manual effort, improves efficiency and production, while helping weavers save time, maintain consistency, and preserve the essence of traditional craftsmanship.

#Innovators

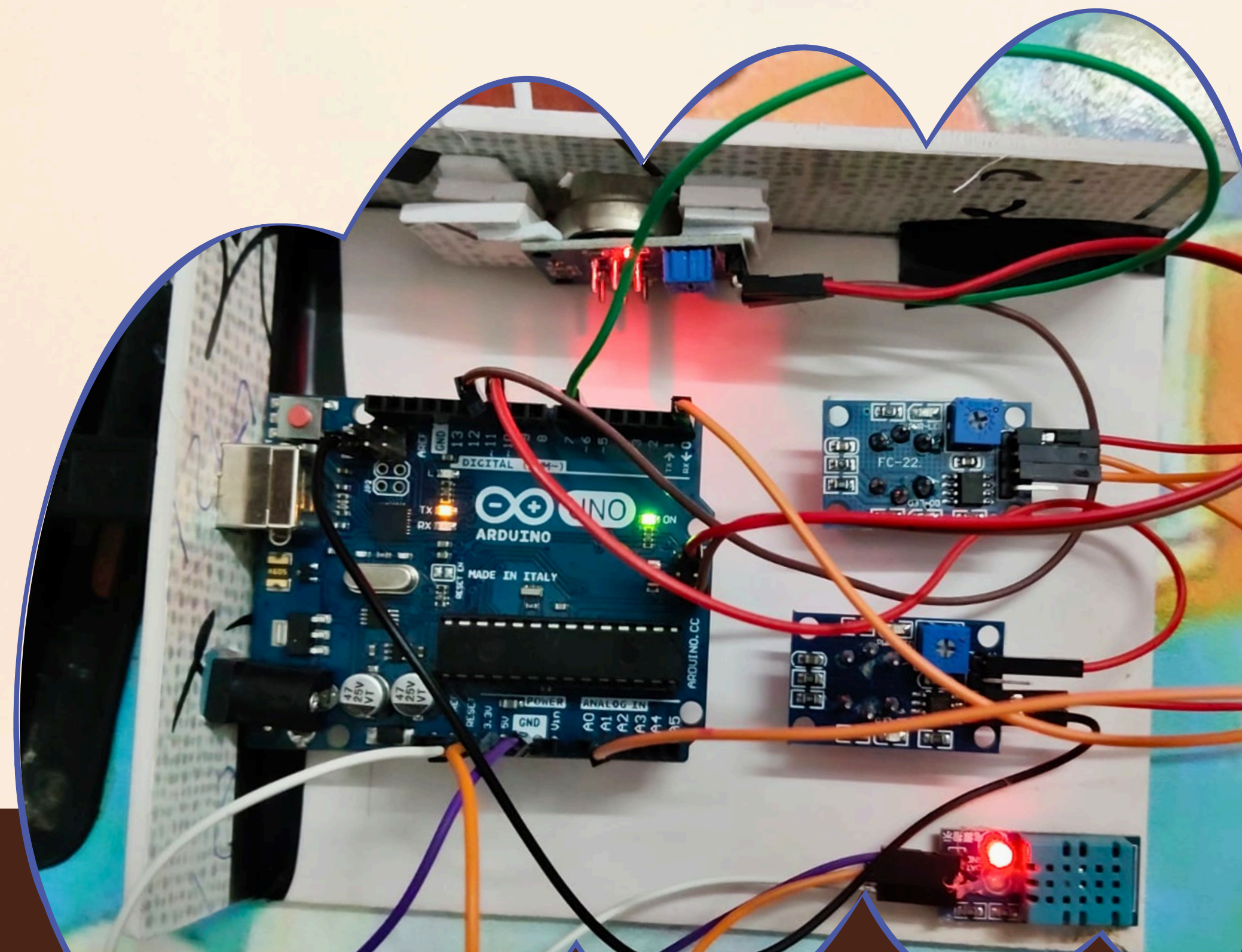


Smart Mining Safety

Team Lead: Partha Sarathi Gochhayat
Nalanda Institute of Technology, Bhubaneswar

The team is working on a smart mining safety gadget, a wearable device designed to protect workers in underground mines. It monitors gas levels, temperature, and movement in real time, with features like fall detection, SOS alerts, and tracking, improving safety, emergency response, and helping prevent accidents.

#Innovators





सत्यमेव जयते

NITI Aayog

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