



RANCHO LABS

Backed and Funded by

Technology Innovation Hub of IIT Delhi, IHFC

Coding & Robotics Winter Camp

Start your child's journey toward the World
of Coding, Robotics and AI with Rancho Labs

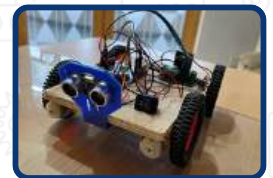


**For Grade
3 to 10**

OUR STORY

We are a group of passionate individuals committed to offer a memorable and impactful learning experience to enhance the interest of students in the field of technology. Started by **IIT Delhi alumni and professors** in 2019, we are a company that aims to ignite curious minds and shed light on flourishing career paths in Artificial Intelligence, Coding, and Robotics through experiential learning.

Supported by the Technology Innovation Hub of the Indian Institute of Technology Delhi. Rancho Labs has built a reputation for being reliable and is trusted by 10,000+ parents and innovators worldwide.



1

DEC 2019
Foundation of RANCHO LABS and Collaborated with Rotary International

2

APR - AUG 2020
Launch of year long Coding, Robotics & A.I. curriculums. Siddharth got Awarde-d(Pradhan Mantri Rashtriya Bal Puraskar)

4

MAY 2022
Incubated and funded by IIT Delhi Technology Innovation Hub

3

JAN - AUG 2021
Conducted Coding, Robotics & A.I. workshop for 150+ schools across India

6

DEC 2022
Implemented Robotics Programme for Delhi Education Board

6

FEB 2023
Started our 2nd offline Robotics centre at Gurgaon

5

JUNE - SEP 2022
Conducted Innovation Exhibition at IIT Delhi & started offline centres at IIT Delhi

Why this Program?

01

Need of the Era



Practical education enhances understanding and application. It develops 21st-century skills, prepares for tech-driven future

02

Idea to Explore a Skill for Life!



Robotics & Coding enhances cognitive development by teaching problem-solving, creativity, critical thinking and preparing kids for STEM success.

03

Practical Learning- Real Life Implementation



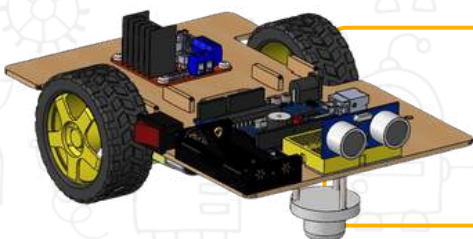
Robotics and coding by Rancho Labs boost personal/professional development in a fun and engaging manner, preparing them for future job opportunities and success in the 21st century

04

Competition Focused Approach



Competition Focused learning robotics can provide kids with a dynamic and engaging learning experience that prepares them for success



We can only see a short distance ahead, but we can see plenty there that needs to be done.

- **Alan Turing (Inventor of AI)**



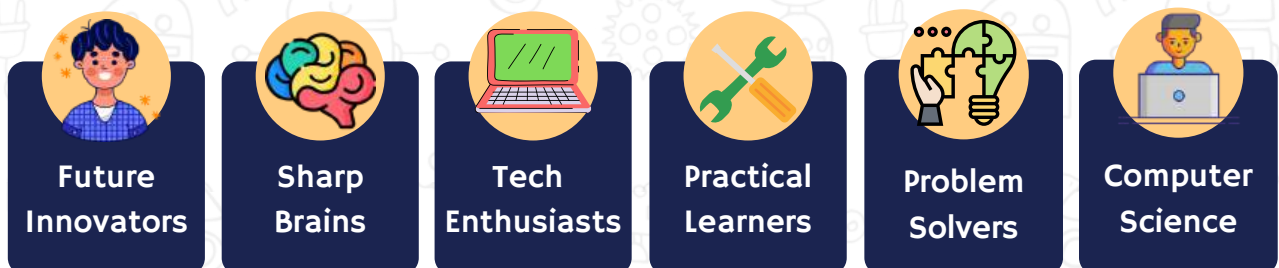
What is this Program?

The Robotics & Coding winter camp by Rancho Labs - an IIT Delhi-backed company is a unique program that offers school kids the chance to explore the world of robotics and coding.

The program provides hands-on learning, healthy competition, and expert mentorship to explore the world of robotics and coding. Students will work in teams to build robots using cutting-edge tools and techniques under the guidance of qualified mentors.

With exciting activities such as designing and programming robots, navigating obstacle courses, and participating in competitions, students will develop critical skills such as problem-solving, teamwork, and communication while having fun and making lasting memories.

Who is this Program for?



Benefits for Students

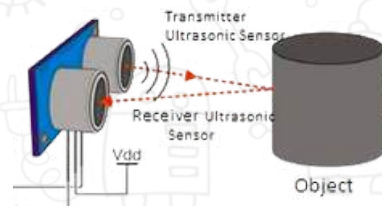
- ✓ Build fun and exciting projects | From concept applications to building robots
- ✓ Improve analytical, logical and algorithmic thinking
- ✓ Encourages innovation | Fosters imagination and Creativity
- ✓ Certification from Rancho Labs | Student portfolio built
- ✓ Mentorship from IITians | Lifelong membership to Rancho Community

Our Methodology

STEP 01

Concept Delivery & Logic Building

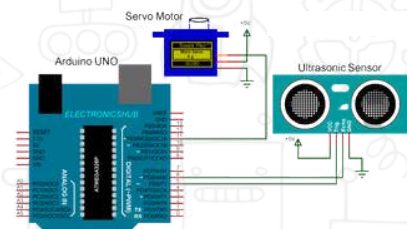
Science and technology concept delivery with logic building by the instructor



STEP 02

Circuit Design & Programming

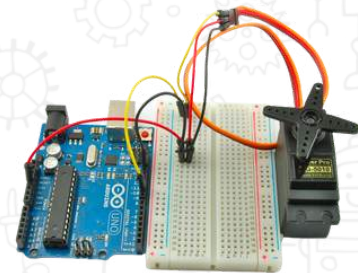
Circuit designing and programming on digital platform



STEP 03

Hardware Activity

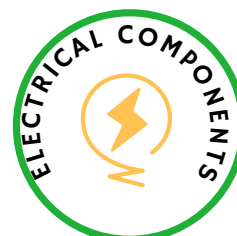
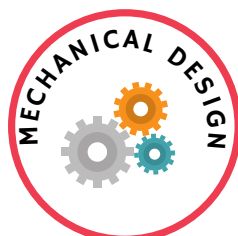
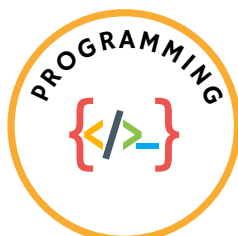
Hardware interfacing of the project using real components



STEP 04






Real-life Project Building

Real-life project building like smart dustbin using the concept learned








Winter Camp Syllabus

For Grade 3rd to 5th

S No.	Name	Topic	Project
1	Robotics Intro	<ul style="list-style-type: none">• What is Robot• Intro to Arduino Micro Controller• How to use Micro Controller and using its Pin• Creating Led Runner	<ul style="list-style-type: none">• LED Runner 
2	Cardboard Engineering	<ul style="list-style-type: none">• Importance of Cardboard Engineering• How to chose the cardboard types• How to use stencil method to design the shapes• Creating 3D structures using 2D shapes	<ul style="list-style-type: none">• House Model Build 
3	Decorative Lamp	<ul style="list-style-type: none">• Using Neo pixel• Using Pixel Light for light Design• Constructing Decorative Light	<ul style="list-style-type: none">• Decorative Side Lamp 
4	Theft Alarm	<ul style="list-style-type: none">• Intro to sensors• What is microwave radar sensor• How can we use radar sensor to detect human• Constructing theft alarm	<ul style="list-style-type: none">• Home Intrusion System
5	Christmas Tree	<ul style="list-style-type: none">• RGB Led Working• LDR Sensor• Using PWM to Control the colors in RGB• Constructing Christmas Light	<ul style="list-style-type: none">• Christmas Night lamp 
6	Final	<ul style="list-style-type: none">• Presentation of DIY project	Convocation Ceremony 

Winter Camp Syllabus

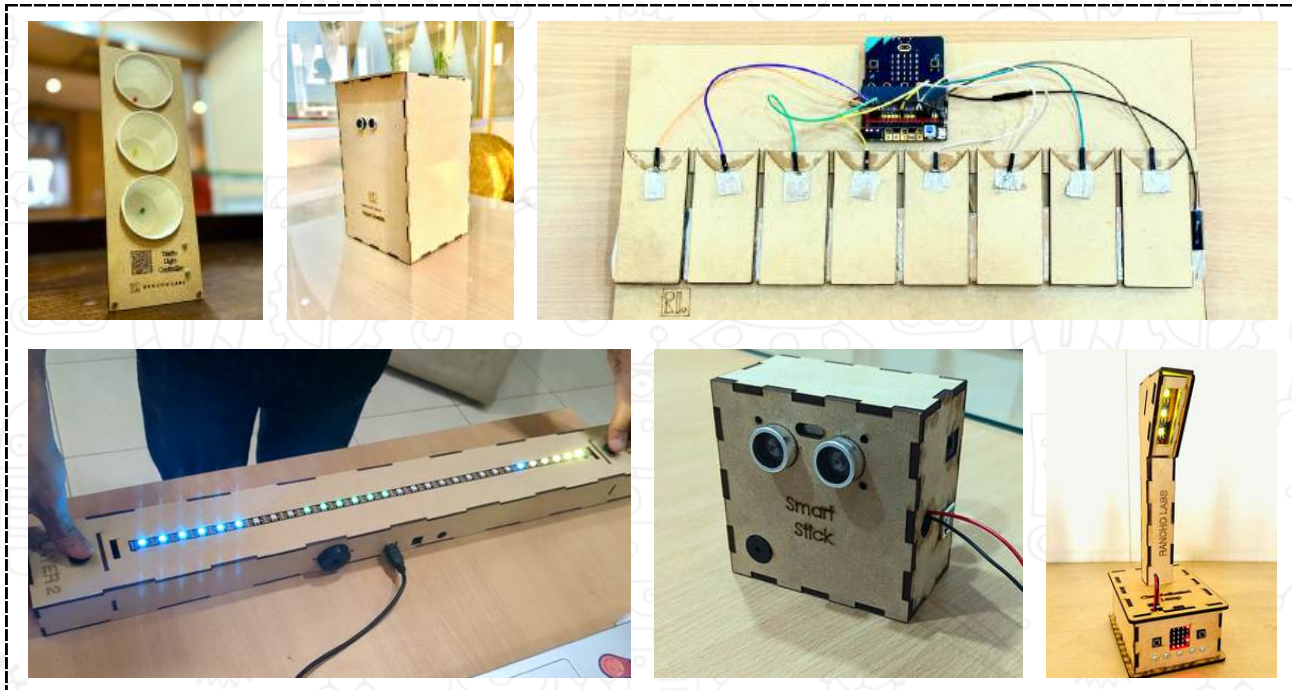
For Grade 6th to 10th

S No.	Name	Topic	Project
1	Robotics Intro	<ul style="list-style-type: none">• What is Robot• Intro to Arduino Micro Controller• How to use Micro Controller and using its Pin• Creating Led Runner	<ul style="list-style-type: none">• LED Runner 
2	3D Designing	<ul style="list-style-type: none">• Importance of 3d designing• How to 3d design in computer• Making a model in cad softwar	<ul style="list-style-type: none">• Making chesses
3	Car Building and Programing	<ul style="list-style-type: none">• Understanding motors• How to control motor with ardiuno• Building car	<ul style="list-style-type: none">• 3D car building process 
4	Ultrasonic Car Parking System	<ul style="list-style-type: none">• Intro to sensor• What is ultrasonic sensor• How to use ultrasonic sensor• Constructing car parking system	<ul style="list-style-type: none">• Car parking system 
5	Obstacle avoiding Robot	<ul style="list-style-type: none">• Understanding about autonomous vehicle• How to code it• Need of obstacle avoidance	<ul style="list-style-type: none">• Obstacle avoiding robot 
6	Final	<ul style="list-style-type: none">• Presentation of DIY project	Convocation Ceremony 



Projects

Throughout the camp, students will develop 3+ hands on projects with real-life applications.



Kit

A well curated and tested electronics kit will be provided to the students with 15+ electrical components, 3 structured kits with Manuals worth **Rs. 5000/-**



Program Details

A 6-Day program in Coding and Robotics with Learn, Build and Innovate methodology

- 8 hours+ in person sessions
- 6 Days of Learning & Building
- Real-life Problem Solving
- Batch size of 10-12 students
- 3+ Hands-On Projects
- H.W. Activity
- Project Based Learning
- One to One assistance

Certification



After Successful completion of the winter Camp, certification will be provided by Rancho Labs- IIT Delhi Technology Innovation Hub Backed organisation.

Innovation Projects from Students



ATREYI KAUL
Class 6th

AUTOMATIC HAND SANITIZER

Integration of different domains of technology with AI. Rancho Labs provides best in class teaching resources for teachers and students

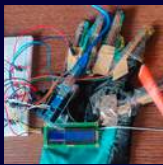


SCAN QR TO
VIEW THE
PROJECT



VIBHAV AGRAWAL
Class 11th

SMART GLOVE



The project helps deaf people to communicate directly with non-signers without needing someone else. The system includes a pair of gloves with sensors that turn finger movements into electrical signals, and a text message is displayed on the LCD output.



SCAN QR TO
VIEW THE
PROJECT



VARUN
Class 6th

AUTOMATIC FAN

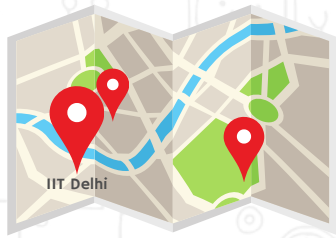
Varun has made an automatic home fan which saves electricity. The fan is embedded with an ultrasonic sensor which senses a person in a room and switches on the fan and when it senses an empty room, it switches off the fan Automatically




SCAN QR TO
VIEW THE
PROJECT



Our Camp Centers



Head Office:
**Vishwakarma Bhawan, IIT
Delhi, New Delhi - 110016**

 IIT Delhi, Hauz Khas

 DLF Phase 1, Gurugram

Batches and Fee Structure

26th Dec - 31st Dec

2nd Jan - 9th Jan

Program Fee: ₹ ~~14,999/-~~ (Inclusive of Taxes)

Early Bird Discount of Rs 2500/- till 10th Dec 2024

Rs. 12,499/-

ENROLL NOW



Note: Avail additional Sibling Discount of 10% on 2 registration
Avail additional Pool Discount of 20% on 4+ registrations

Have A Query ?

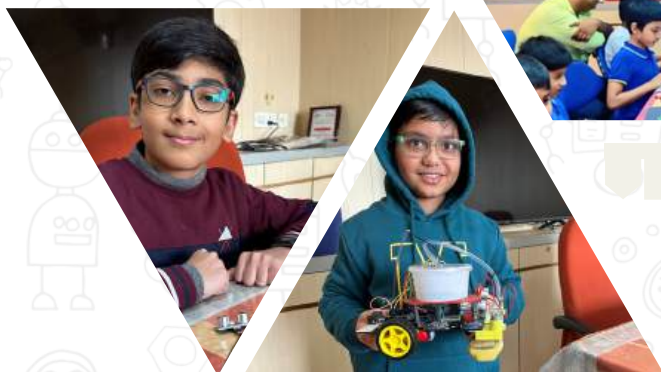
Contact the Sales Executive:
Akansha (+91 9871757899)

"The best way to predict the future is to invent it." - Alan Kay



**GREAT
MINDS**

**START
YOUNG!**



Contact Us



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