



RANCHO LABS

**Great Minds Start Young**

# Introducing Tech- Weekend for Grade 6-10 Students

An initiative by **IIT Delhi Alumni** and  
Professors

[www.rancholabs.com](http://www.rancholabs.com)

# About Rancho Labs

We are Rancho Labs, a unique startup that loves to learn, build and innovate. Initiated in 2019 by IIT Delhi Alumni and Professors with an aim to transform students' dreams into reality, Rancho Labs is a trusted community of **10000+** students and parents that empowers young minds to discover their passion in Coding, Robotics and AI.



# The Team



**Anshul Agrawal**

Co-founder, Rancho Labs

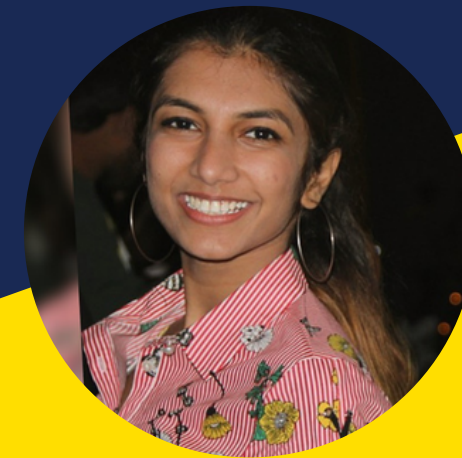
Mechanical Engineer,  
IIT Delhi



**Aman Kumar**

Co-founder, Rancho Labs

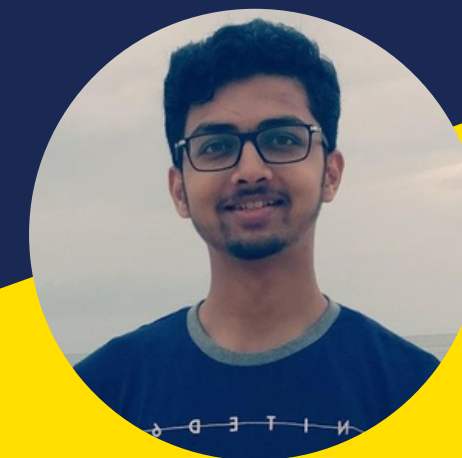
Chemical Engineer,  
IIT Delhi



**Ayushi Tulsyan**

Computer Science  
Engineer, BVCOE Delhi

Artificial Intelligence  
Expert



**Rohan Yuttham**

Overall Coordinator  
Robotics Club, IIT Delhi

Robotics and Automation  
Expert

# Our Unique Methodology

We believe that whatever we learn today, is learned best if it is applied the same day. The students at Rancho Labs Learn, Build and Innovate every single day.



## LEARN

Students learn via live lectures taught by highly qualified teachers. Each class is designed based on the curiosity and interests of the student.



## BUILD

Each class is followed by a live project to maximize the student's learning. Master the skills that you've learnt by building projects, the fun way.



## INNOVATE

Acquire the right skills and experiences by learning and building to solve a real-life problem.

# Launching in three themes:

1

## Coding, Robotics & AI

Carry out automation tasks with the help of your own robots



2



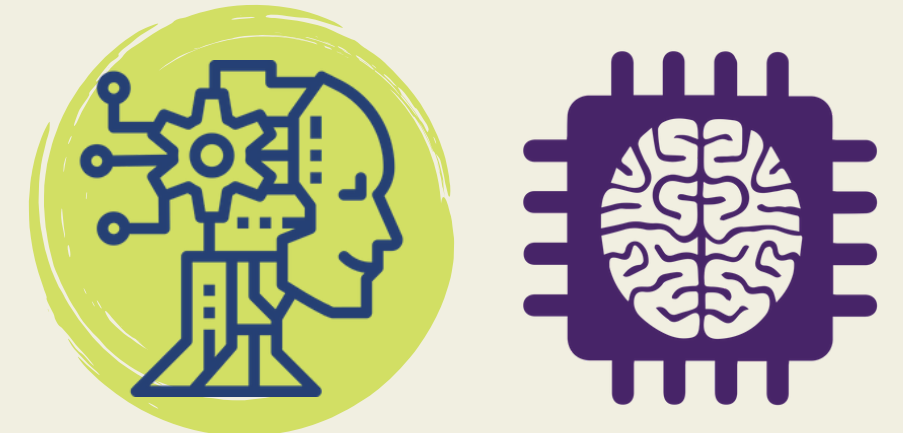
Build useful apps and interesting games

## Coding, Game Development & AI

3

## Coding, App Development & AI

Learn how to apply AI and ML to social, humanitarian and environmental challenges



# 1

## Program Structure: Coding, Robotics & AI

A 2-days experiential program in Coding and Robotics with Learn, Build and Innovate methodology designed by **IITians**

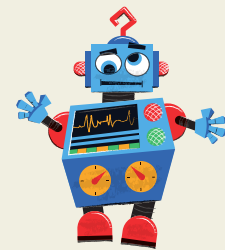
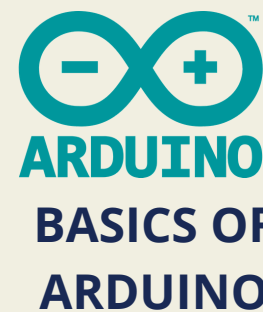
### WHAT WILL STUDENTS LEARN?



**BASIC  
CODING**



**UV  
Sensor**

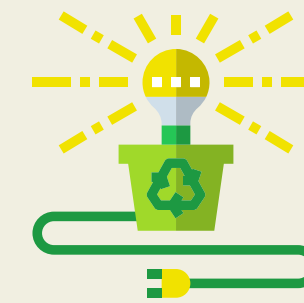


**ROBOTICS**

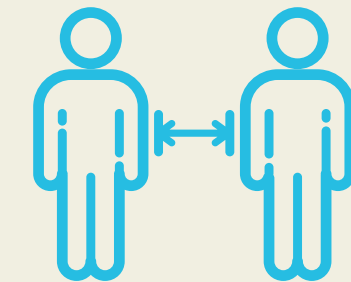


**ARTIFICIAL  
INTELLIGENCE**

### WHAT WILL STUDENTS BUILD?



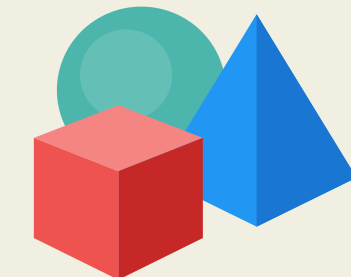
**Led Blinking**



**Social  
Distancing**



**Traffic Light  
Controller**



**Object  
Recognition**

1

## Program Structure: Coding, Robotics & AI

<b>Day</b>	<b>Day 1</b> (1.5 hrs LIVE Session by IITians)	<b>Day 2</b> (1.5 hrs LIVE Session by IITians)
<b>Learn</b>	Introduction to Robotics Coding Arduino and circuits	Introduction to Sensors Intro to AI & Algorithms AI Models working
<b>Build</b>	LED Blinking Project Diwali Light Projects Traffic Light Controller Project	Object Recognition Project Social Distancing Project

# 2

## Program Structure: Coding, Game Development & AI

A 2-days experiential program in Coding, Game Development and AI with Learn, Build and Innovate methodology designed by **IITians**

### WHAT WILL STUDENTS LEARN?

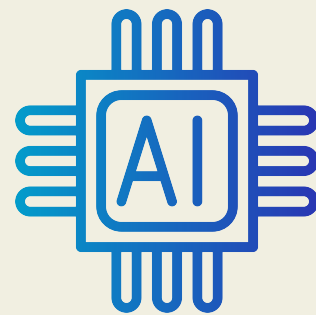
### WHAT WILL STUDENTS BUILD?



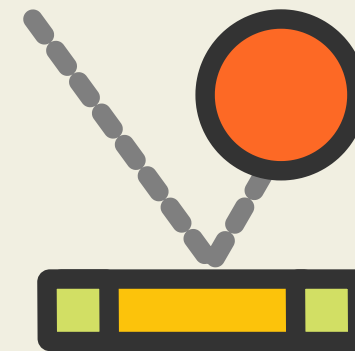
**BASIC  
CODING**



**Game  
Development**



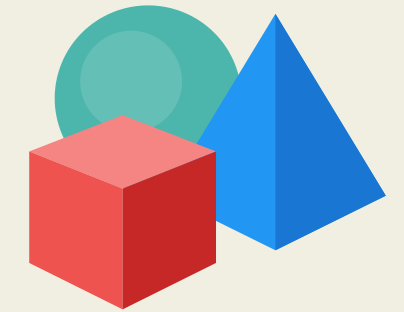
**ARTIFICIAL  
INTELLIGENCE**



**Bouncing Ball  
Game**



**Collect the  
coins game**



**Object  
Recognition**



# 2

## Program Structure: Coding, Game Development & AI

<b>Day</b>	<b>Day 1</b> (1.5 hrs LIVE Session by IITians)	<b>Day 2</b> (1.5 hrs LIVE Session by IITians)
<b>Learn</b>	<b>Introduction to Coding and Game Development</b>	<b>Codes and Artificial Intelligence</b>
<b>Build</b>	<b>Bouncing Ball Game Algorithm Discussion</b>	<b>Collect the Coins Game and Object Recognition Project</b>

# 3

## Program Structure: Coding, App Development & AI

A 2-days experiential program in Coding, App Development and AI with Learn, Build and Innovate methodology designed by **IITians**

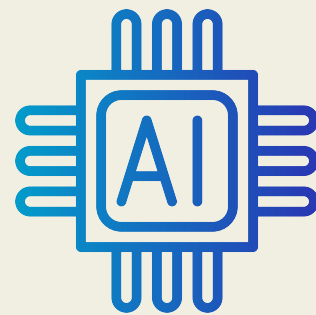
### WHAT WILL STUDENTS LEARN?



**BASIC CODING**



**App Development**



**ARTIFICIAL INTELLIGENCE**

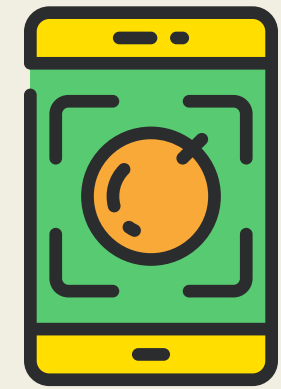
### WHAT WILL STUDENTS BUILD?



**Translator App**



**Speech Recognition App**



**Object Recognition**

# 3

## Program Structure: Coding, App Development & AI

<b>Day</b>	<b>Day 1</b> (1.5 hrs LIVE Session by IITians)	<b>Day 2</b> (1.5 hrs LIVE Session by IITians)
<b>Learn</b>	<b>Introduction to Coding and App Design Development</b>	<b>Speech Recognition and Object Recognition</b>
<b>Build</b>	<b>Translator App and App Design</b>	<b>Speech Recognition App and Object Recognition</b>

# How will **Students** benefit?



- Build fun and exciting projects | From games, applications to robots
- Improve analytical, logical and algorithmic thinking | Increase marks
- Encourages innovation | Fosters imagination and Creativity
- Participate and win at National and International competitions
- Certification from Rancho Labs | Student portfolio built
- Bring smiles to your society by solving it's problems | Build Prototypes

# Some Innovations From Rancho Labs

## Siddharth Kumar Gopal(Class 7)

He came up with the idea to help people minimize the damage in flood-prone areas. Using concepts of robotics learned during the course, he developed a smart bed that can convert into a boat at the time of the floods. We were amazed to see the response. He received various awards and recognition and got published in "**The Times Of India**".

**SIDDHARTH KUMAR GOPAL,**  
class VII; St Thomas Residential School, Thiruvananthapuram

### Project: Boat-o-Bed

**THE PROJECT:** A prototype of a smart bed; 'Boat-o-Bed' is aimed at making bedridden people atmanirbhar in the event of a flood. The bed is equipped with a GPS/GSM unit. Using a moisture sensor and servo motors, the smart bed will automatically tilt down, and the patient along with the bedding will start floating. Simultaneously, an alert will be sent to pre-configured telephone numbers, which will help the rescue workers to reach the person in need faster.



“ The idea came up, when I saw the difficulties faced by the rescue workers to rescue bedridden people stranded during Kerala floods. They were lifted along with their beds on the boats. So, I thought, if the bed could be converted into a boat, it would be helpful

# Some More Innovations



## Voice Controlled Automation

Multipurpose voice control system to control home appliances & robots

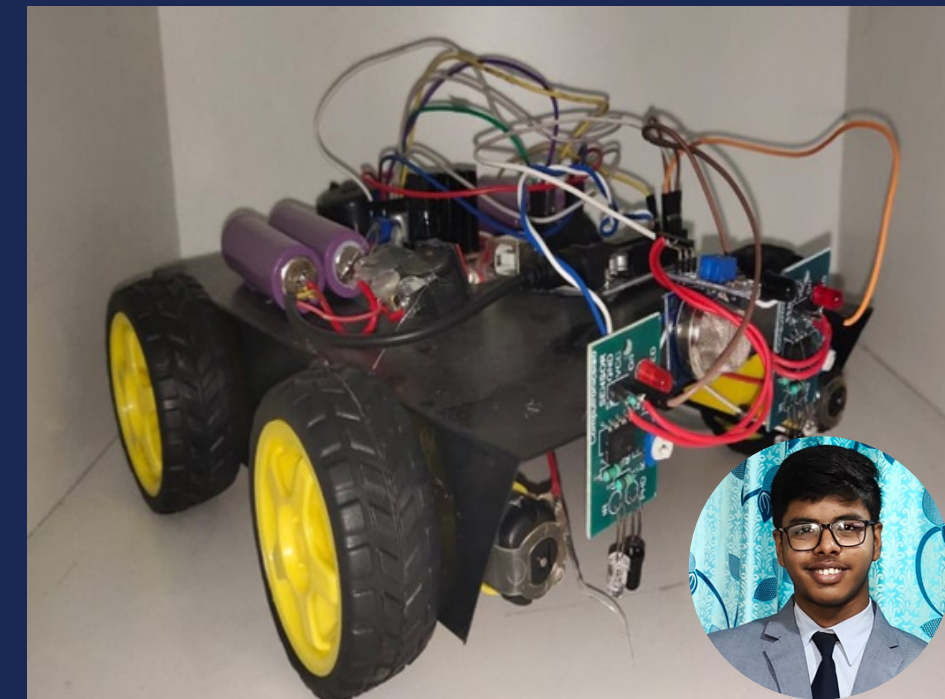
Karandeep Singh



## Intuitive Sanitizing Tunnel

A sanitization tunnel using UV Bath to kill the bacterias and viruses

Aryan Verma



## Fire Rescue Robot

An automated robot to detect smoke and rescue

Shaik Arif

# Feedback from students and parents

"The course is seeming to interest me more than I thought it would and despite of the current covid19 situation, the team [Anshul sir, Aman sir & Rohan sir] is really able to explain the concepts and especially with help of the tinkercad software, I am able to comprehend that how circuits work and I am also able to understand arduino programming and coding. Finally, I would say that I found the course very interesting and I would look forward to joining courses like these in future."

**Kanav Atre**  
**Delhi Public School**  
**Indirapuram, New Delhi**

The Robotics course by Rancho Labs has been a great learning experience for Siddharth. The classes were well planned and executed and the instructors were available round the clock to clarify doubts. Hands on projects in stimulated environments helped students to reinforce concepts learned every day. I am happy to have enrolled my son in this course, as it has given a solid foundation to 'future proof' his skill sets.

**Vandhana (Siddharth Mother)**  
**St Thomas Residential School -**  
**Kerala**

Although learning how to build robots, circuits and innovative projects seems like a hands-on activity, the amazing team at Rancho Labs has managed to achieve this feat on a virtual platform as well. Over the course of a month, I have gained a vast amount of knowledge in this field, and the projects that we have to make have really fascinated me. The best part of Rancho Labs is that they prepare you for the present as well as the future.

**Varyam Gupta**  
**The Doon School, Dehradun**

# Program Fee and Starting date:



## FEE

~~Rs 499/-~~ Special early bird discount (If registered before 29 May, 2021) **Rs 249/- only**



## WHERE TO REGISTER?

Excited for the program? Register here.  
<https://rzp.io/l/v4VwuBGXnQ>



## LAST DATE TO REGISTER

Book your seat before 29th May, 2021



# Let's make the students future-ready together!



Contact us:

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[www.rancholabs.com](http://www.rancholabs.com)