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# SUMMER 2025 BOOT CAMP

*YOUNG ELON MUSK*



## TECH GENIUS

ROBOTICS  
CODING  
ARTIFICIAL INTELLIGENCE  
3D DESIGN - 3D PRINTING  
DRONE TECH



**EVOLVE ROBOT LAB**

robot innovation lab

Nanganallur, Chennai, Tamil Nadu 600061

Time: 11.00 am - 8.00 pm

Enquiries: 07358006064

Location: Ram Nagar, Nanganallur .

# ROBOTICS

## Software: Tinkercad & IDE



## Curriculum include:

Basics Electronics - Current, voltage, resistors, batteries  
Circuits

What is Arduino

Analog / Digital communications

PWM signals

Serial Communication

Servo motor

DC Motor

Breadboard

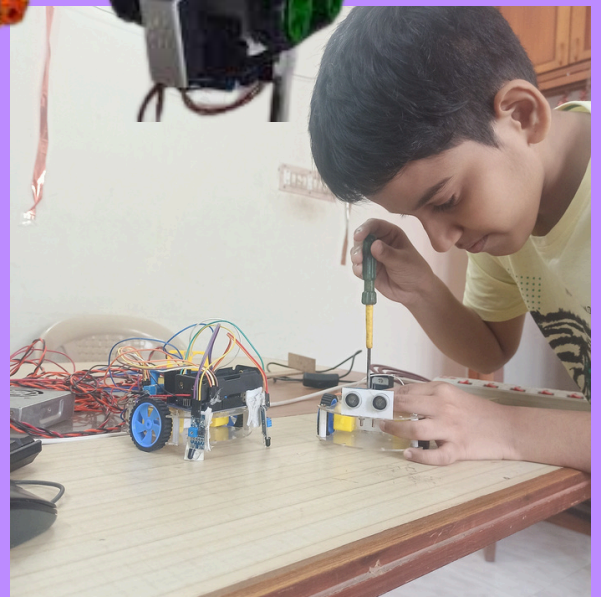
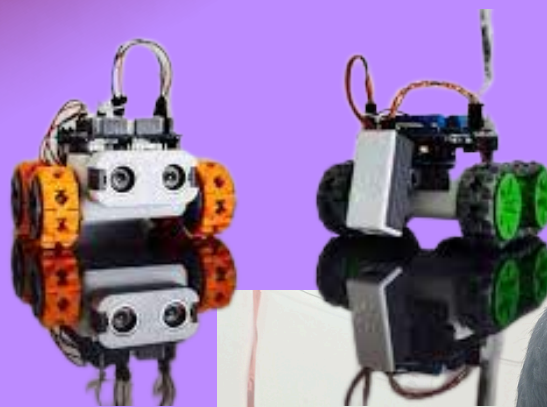
Jumper wiring

Power source

Motor Driver

Ultrasonic SensorM

Programming Arduino Micro Controller



DIY1: Blinking LED Using Arduino

DIY2: LED with push button, led with Arduino

DIY3: Push button-controlled motor Arduino

DIY4: CREATIVE PROJECT

DIY5: L298 N H-bridge controlled motor Arduino with pushbutton

DIY6: Arduino Controlled Servo motors

DIY7: Ultrasonic Distance Sensor HC-SR04 with Buzzer, LED and Arduino

DIY8: Ultrasonic with servo (door opening) and led glowing

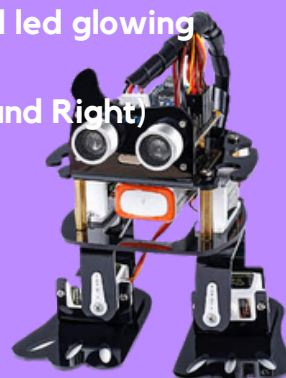
DIY9: Ultrasonic with motor (Stop and Start)

DIY10: Ultrasonic with 4 motors (Turning Left and Right)

DIY11: Obstacle Avoidance Robot

DIY11 : Servo motor based robotic arm

DIY12 : Bluetooth App control robot

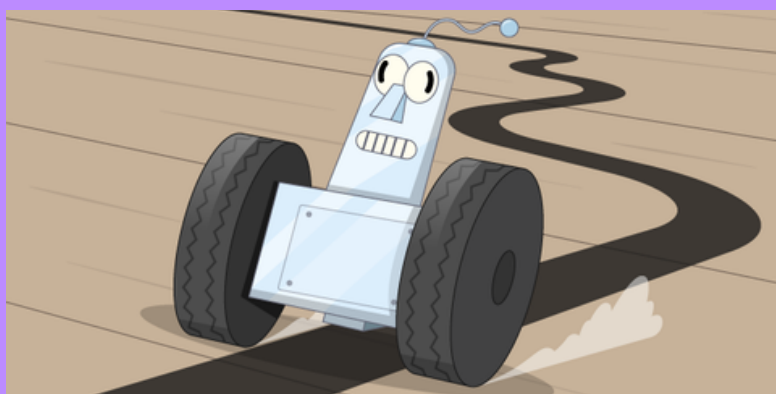


No.	Projects	Skill Level
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1.	Walking Robot	0
2.	Robot Car	1
3.	Automatic Door System	1
4.	Obstacle Avoidance Robot	2
5.	Line Following Robot	2
6.	Joystick Control Robotic Arm	3
7.	Dancing Robot	3
8.	Drone	4
9.	Robotic Hand	3
10.	Maze Solving Robot	3



<b>Total duration</b>		<b>24 hrs</b>
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# CODING

## Software: Python, C++, Scratch programming

Introduction to Scratch

Basic Blocks and Loops in Scratch

Sound and Visuals in Scratch

If and Else Blocks in Scratch

Sensory and Collision Reaction Blocks in Scratch

Variables in Scratch

Introduction and Printing in Python

Number/Strings and Variables in Python For/While Loops in Python

For/While Loops in Python

Inputs and If/Else/Elite Statements in Python

Lists and tuples Sets

Dictionaries

Functions

Modules and imports

User input

File handling

Classes and objects



### Make A Level Game in Scratch

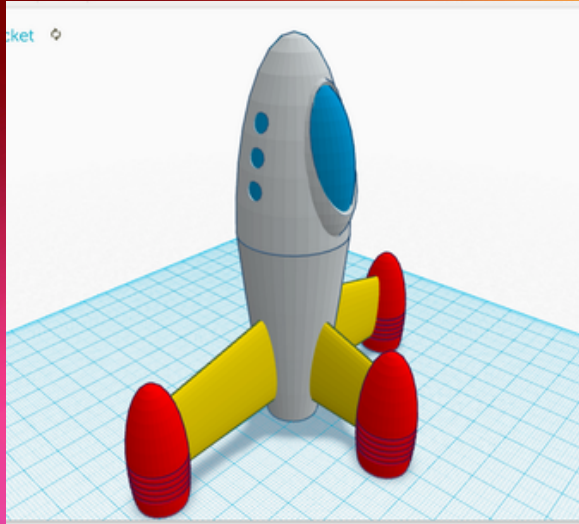


# 3D DESIGN & 3D PRINTING

## Software: Tinkercad & Cura

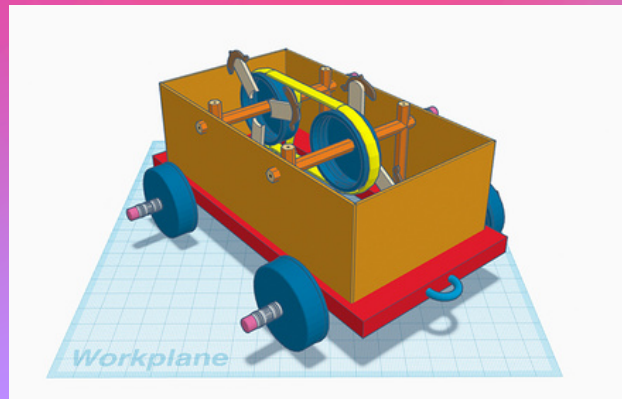
### 2D design

Lines, rectangles , Circle etc  
Curves , polygons  
Constraints  
Dimensions  
Erase, cut ,trim  
Mirror, scale , symmetry  
Creative projects  
2D line diagrams



### 2D to 3D modeling

Shapes  
Extrude  
Revolve  
Pattern  
Parts Assembly



## Introduction to 3D printing

### SOFTWARE: ULTIMAKER CURA

- 3D Slicing Software ,
  - Filaments,
  - Extruders,
  - Bed
- Post processing 3D model
- File uploading to 3D printers
- Support for Complex model

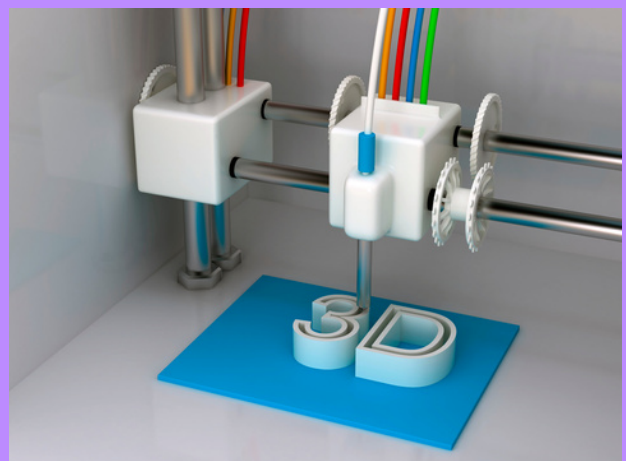
DIY1 : What is 3D printing & printer components

DIY2: Uploading 3D model into the software

DIY3: Slice model in workbench

DIY4: Software Settings for best printing

DIY5: Printing your first 3D model robot



# ARTIFICIAL INTELLIGENCE

## Software: VS Code & Python



ChatGPT

What is AI?

Intelligent agents– PEAS

· Searching Techniques

· Knowledge Representation and Reasoning

· Expert Systems and its Application

· The Future of AI

Machine Learning

· Why machine need to learn?

· Types of Learning

· Supervised Learning (Regression analysis)

· Supervised Learning (Classification)

Deep Learning

· Artificial Neural Network

– CNN & RNN

Intro to Gen AI

– foundation models & API

AI chatbot

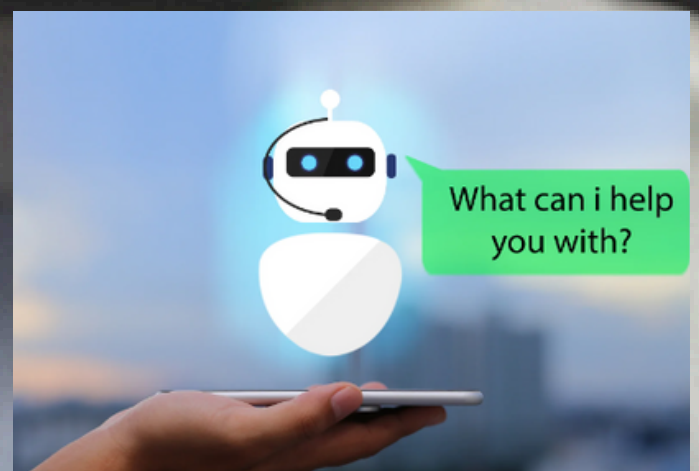


## Projects

AI CHATBOT APP

VOICE ASSISTANCE COMPANION AI

FACE RECOGNITION AI



**THANK YOU,  
WE LOOK FORWARD  
TO WORKING WITH YOU.**



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# தூர்கா AI

## TAMIL LANGUAGE GEN AI

**A NEW ERA FOR TAMIL DIGITAL INTERACTION**



**Our Business Services**

**AI SALES CHATBOT**

**SOCIAL MEDIA AI CHATBOT**

**AI CONTENT WRITER**

**CUSTOM AI FOR BUSSINESS**

*A revolutionary Tamil AI designed to  
serve and connect the Tamil*

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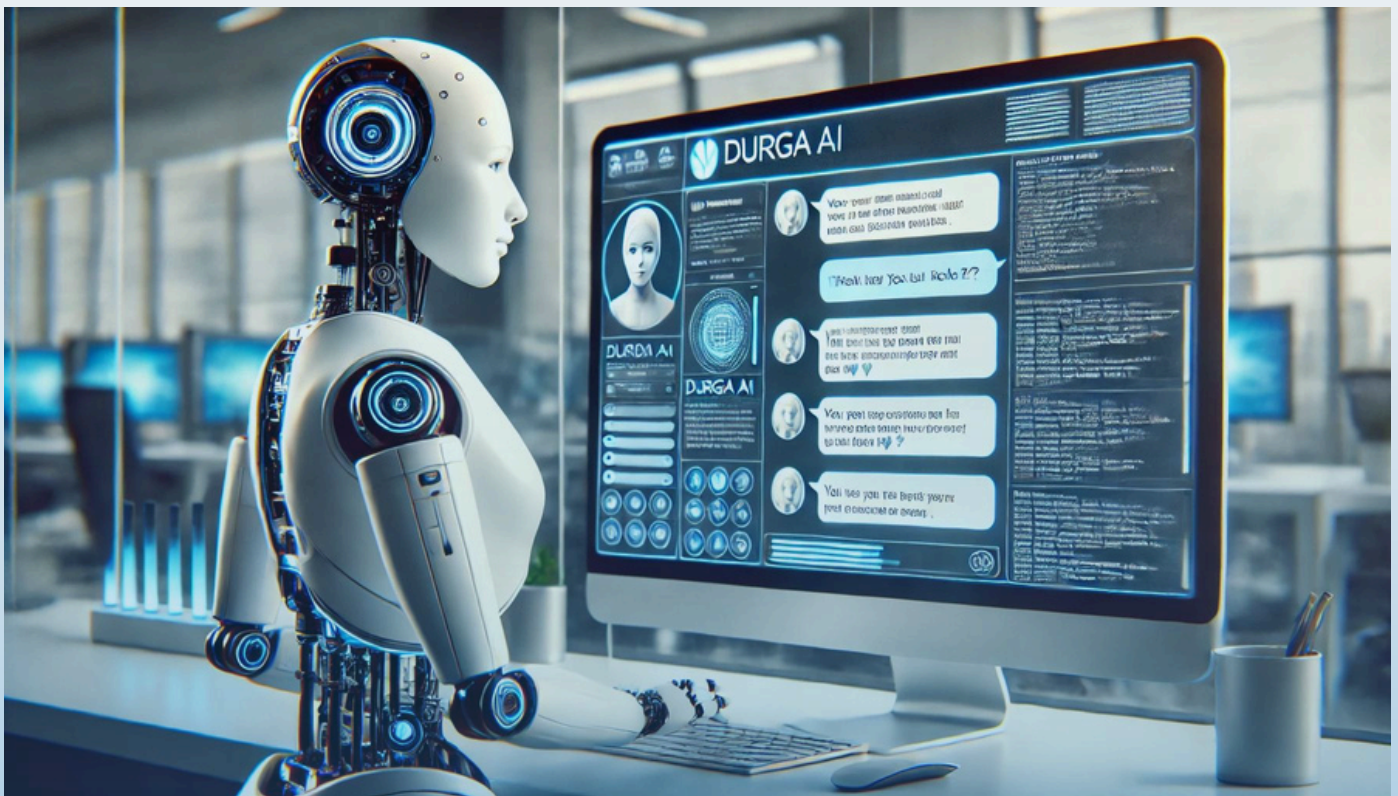
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# Succeed 100x With AI Marketing

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