



RoboticSchools



ADVANCE LEVEL CURRICULUM

92+ CLASSES | 40+ PROJECTS | 12+ PLATFORMS | 25+ QUIZZES



#21ST CENTURY SKILLS



CODE



BUILD



RUN

www.roboticschools.com



About RoboticSchools

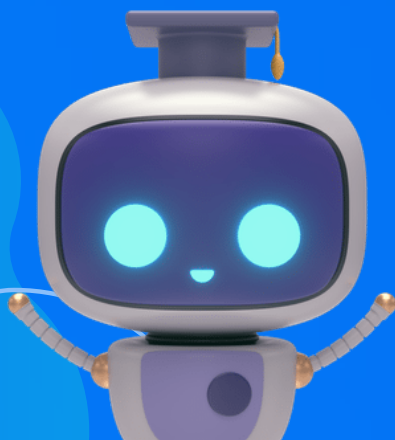
Roboticschools is an e-learning platform intended for children. The company's platform provides live 1:1 and 1:2 learning sessions with qualified engineers and educators worldwide, enabling children to learn about engineering and coding from the comfort of their homes. And provides 21st-century skills to schools.



Our Vision

Best Provider of online & offline learning platforms intended to deliver high-quality, engaging, and accessible technology education (i.e., Robotics, Coding, Artificial Intelligence, Machine learning, Automation). The company's platform makes use of original content, watch-and-learn videos, rich animations, and interactive simulations that make learning contextual and visual, not just theoretical, enabling each learner to receive a personalized experience.

Our aim is to provide technology education (i.e., Robotics, Coding)
accessible, affordable to all.



www.roboticschools.com

Benefits for Kids



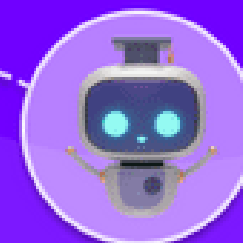
Let's Start the Course in RoboticSchools



Select a Course



Learn with us



Code and Build
for Future



ADVANCE LEVEL



RoboticSchools

What Kids learn from this Level ?



MIT Scratch
Blocks



MIT App
Technology



Circuit
Simulations



Sensors
Integration



Math &
Co-Ordinates



Python
Coding



OpenCV
Projects



Drone
Coding

92 Classes

16 Classes



Stickman Dodger



- Design UI Buttons
- Physics-Collision effects
- Logical operators

Racing Game



- Player controls
- scratch pen extension
- Automate the obstacles

Airplane Fighter



- Unidirectional Player
- Switching event blocks
- Multi-level creation

Survival Runner



- "and", "or" operators
- waypoints, collectibles
- Background Effects

Raptor Rush



- 3D movements of Raptor
- Backdrop magnifier
- Pen extension UI buttons

Desert Warrior



- Input parameters
- Multiple nested loops
- UI Menu player settings

13 Classes



Basics of python



- Python syntax
- Conditionals
- For and while loops

Python - Arduino



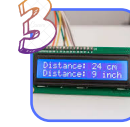
- Installing pyserial Library
- Serial communication
- Array to receive the data

Face Detection



- Importing OpenCV
- openCV functions
- Python Modules

Distance Finder



- Ultrasonic connections
- python serial module
- Animate graphics

Elbow angle Finder



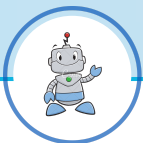
- Google Mediapipe Library
- Importing pose module
- Pose modules parameters

Lamp Gesture Control



- Hand Tracking Module
- Hand distance co-ordinates
- Media pipe Landmarks

14 Classes

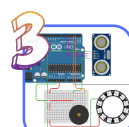


Voice Control Robot



- Google voice features
- Split Text function
- Send a 1-byte number

Social Distance Alarm



- Working of Ultrasonic sensor
- Reading data from the sensor
- Physics - Sound frequency

Autonomous Robot



- Delay function
- Physics unit conversions
- If, else conditions

Attendance System



- serial Communication
- Finding the tag number
- RF ID Receiver Libraries

Line Following Car



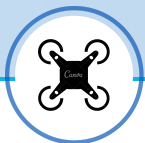
- Multi-sensor connections
- limitation of line angles
- sensor detection

Home Automation



- Merging sensors data
- Sending data to app
- Password door locking

17 Classes



Drone - python Integration



- Drone Library
- Connecting to drone
- Takeoff and Land

Drone Movements



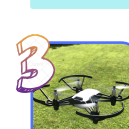
- Moving commands
- Sending rc data function
- Define object

Manual & Automatic



- Sequencing commands
- KeyPressModule
- Define a function

Drone surveillance



- Import openCV
- Arrays
- Broadcasting video

Take a Selfie



- Keyboard control
- Key to capture a selfie
- Hand Landing

Object Tracking



- Numpy Library
- Object detection
- Drone Motor Velocities



ADVANCE LEVEL



RoboticSchools



Lua
Scripting



HTML
Pages



Roblox
Game Dev



Arduino
Coding



92 Classes

18 Classes



Roblox Sudio



- Install Roblox Studio
- Setting workspace
- Character Properties

Lua Scripting & obby



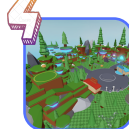
- Lua syntax
- Variables, loops
- Obby game scripting

Dice Game



- Create Dice
- Server script
- Lua rotate function

Lone Survivor



- Advanture Map
-

Treasure Hunt



- Placing Treasures
- Touching Events
- Spawn Location

Zombie Hunter



- Creating map
- Player Asserts
- Zombie, player scripting

14 Classes



HTML Introduction



- HTML Basics
- Headings, Elements
- HTML Styles

Gallery of Media



- Embedd media into page
- src and alt Atributes
- Embedd youtube video

HTML Emojis



- HTML Character set
- why emoji's are diff.?
- Sizing the Emojis

Unit conversion webpage



- Math Terminology
- User Input
- Javascript function

Marks Pie Chart



- Google charts
- Javascript function
- Mouse pointer animation

Animated personal portfolio



- Creating Menu
- Writing About Me
- Simple Animations

21st Century Skills

CODE

BUILD

RUN





Stickman Dodger



- Design UI Buttons
- Player falling animations
- Physics - Collision effects
- Vertical movement of obstacles
- Create Player, obstacle with different sizes
- Logical operators
- Cloning blocks



MENU

BACK ◀

Racing Game



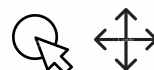
- Adding sprites, obstacles into scratch
- Player controls
- scratch pen extension
- Fading animations
- Automate the obstacles
- Adding Healthbar and score
- Adding multiple logics in one condition



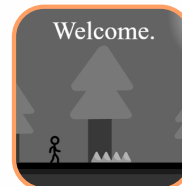
Airplane Fighter



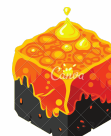
- Unidirectional Player constraints
- Mouse pointer movements
- Multiply obstacles using clone blocks
- Switching event blocks
- Multi-level creation
- Surprise villain in the last level.
- Adding shooting properties to player



Survival Runner



- Real-time walking animation to player
- "and", "or" operators
- Creating multiple levels in backdrops
- Spikes, lava, and moving platforms
- waypoints, collectibles, and UI menu
- slopes, limb posing animations
- Background Effects



Raptor Rush



- 3D movements of Raptor
- Broadcast message to sprites
- Random costume switcher
- Player controls
- Backdrop magnifier
- Raptor sound effects, health, and score
- Pen extension UI buttons



Desert Warrior



- Advanced moving and attacking obstacles
- Function definition using my blocks
- Input parameters
- Multiple nested loops
- Condition to end the clone from the screen
- Switching sprite costumes of end tags in order
- UI Menu player settings





Python OpenCV - Robotics



Basics of Python



- Python syntax
- Define a variable
- Data types in Python
- Math Operators
- Conditionals
- For and while loops
- Data Structures - List, Tuple, set, Arrays



Python - Arduino



- Installing Latest ver. of Python and pycharm
- Installing pyserial Library
- Serial communication
- LED connections to Arduino
- LED Graphics design into importing into code
- Array to receive the data
- Arduino function to process the array data



LED Control using Face Detection



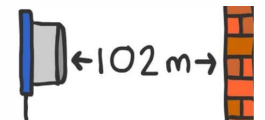
- Importing OpenCV
- Introduction to python modules
- Importing face detection modules
- OpenCV functions (imshow, imread, etc.,)
- Defining array
- Storing values in an array
- Continuous frame reading



Distance Finder



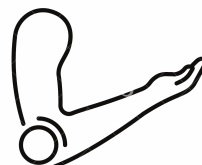
- Ultrasonic, Arduino connections
- Conversion of signal data into distance
- Accessing Serial monitor using commands
- python serial module
- Receive data from Arduino without delay
- Design of Ultrasonic sensor Graphic Images
- Animate graphics respective to data



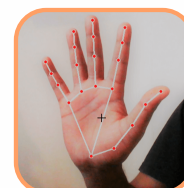
Elbow angle Finder



- Learn to use Google Mediapipe Library
- Importing pose module
- Arduino servo motor library
- Storing multiple values in an array
- Capture real hand elbow values using video capture
- Design and create a prototype of Elbow
- Pose modules parameters



Lamp Gesture Control



- IoT lamp connections with Arduino
- Python Hand Tracking Module
- Hand distance co-ordinates
- Media pipe Landmarks
- Finding distance between nodal points
- Adding percentage graphics bar on the screen
- Process the percentage values and send to Arduino





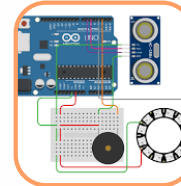
Voice and Speed Control Robot



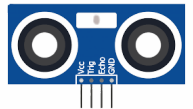
- Including Google Assistance features into App
- Conversion of Speech into Text
- Split Text function
- Into to float number and rounding it
- Adding slider in the App Use Interface
- Sending 1-byte number to Arduino



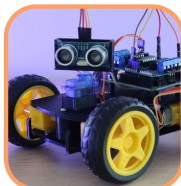
Social Distance Alarm



- Working of Ultrasonic sensor
- Sensor connections with Arduino
- Reading data from the sensor
- Neo pixel Ring connections and code
- Importing Adafruit Libraries
- Physics - Sound frequency
- Sound frequency to distance conversion



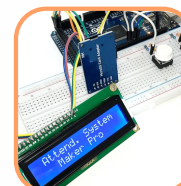
Autonomous Robot



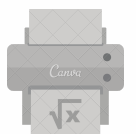
- Assembly of the sensor to Arduino car
- Connections with Arduino Motor shield
- Delay function
- Physics unit conversions
- Arduino car directions
- If, else conditions to automate the Arduino car
- Speed controller code



Attendance Management System



- Introduction to RF-ID and its working
- RF ID receiver connections with Arduino
- Details of serial Communication
- Print function to display the list
- Finding the tag number
- Exporting data to Data management sheet
- RF ID Receiver Libraries



Line Follower Robot



- Working and calibrating IR sensors
- Mounting IR sensors on the vehicle with connectors
- Multi-sensor connections with Arduino
- Conditions to follow the line
- Receive the data and process it
- limitation of line angles
- sensor detection and code adjustments



```

If (1==2)
{
  Something()
  Gone()
  Wrong()
}

```

Home Automation



- Building the cardboard Home
- Adding Sensors
- Merging sensors data
- Display in Serial monitor
- Build the Mobile app in MIT App Technology
- Sending data to mobile app
- Password door locking system
- Temperature, humidity, Automatic sensor light system features, etc.,

SMART HOME
AUTOMATION



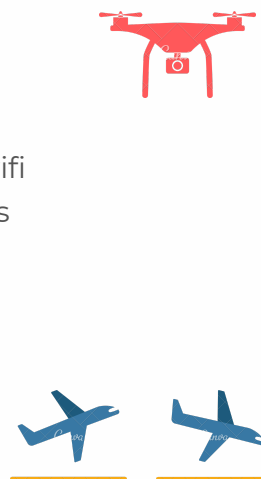
Detailed Drone Curriculum



Drone - Python Integration



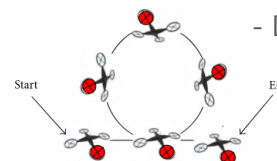
- Software Installation
- Importing Drone Library
- Connecting to drone through wifi
- Takeoff and Landing commands
- Printing Battery Percentage
- Drone motors
- Working principle of Drone



Drone Movements



- Moving commands using predefined function
- Defining drone as an object
- Sending data to the drone
- Moving Left and Right side
- Rotating the drone - clock and anticlockwise
- Drone full rotation flips



Manual and Automatic



- Writing commands in sequential order
- Importing KeyPressModule
- Define a function
- Importing pygame for graphics
- Sleep function
- Nested if conditions
- Done motor velocities



Drone Surveillance



- Import openCV library into pycharm
- Define Arrays to send data
- Broadcasting video from drone camera
- send_rc_control predefined function
- speed control Instructions
- Defining global variable
- Return the function



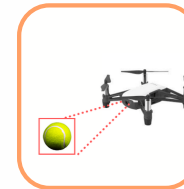
Take a Selfie



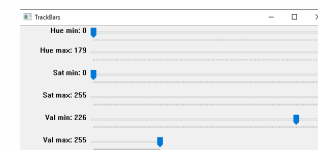
- Keyboard keypress control
- Key to capture a selfie
- Create a folder in project to save Images
- Keyboard Input function
- Pygame functions
- Hand Landing
- Define Main Module



Object Tracking



- Importing Numpy Library for arrays
- Python function Arguments
- Object detection using OpenCV
- stacking Images
- Creating trackbars and windows for better detect the object manually
- Drone motor velocities





Roblox Studio



- Creating an account in Roblox
- Installing Roblox Studio
- Workspace settings
- Editing Roblox templates
- Learn to use Toolbox
- Design Terrain with Roblox options
- Setting up the spawn location



ROBLOX



Dice Game



- Creating Dice using geometry shapes
- Adding script in server script service
- Accessing objects
- Change of properties using a script
- Lua random rotation function
- Environment Settings



Lua scripting & Obby



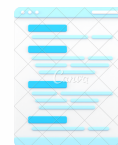
- Basics of Lua scripting
- Learn to use server script service
- Defining variables in LUA
- Loops, Conditionals, and Functions
- Obby game platform design
- Write script for the moving platform
- Touching function



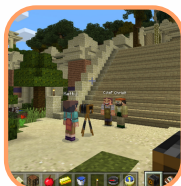
Lone Survivor



- Adding Survival player Elements
- Pressing Keys with the UserInputService
- Sending Information with RemoteEvents
- New Instances with Scripts
- CFrame
- Replicated Storage and Server Storage
- Multiple Parameters and Arguments



Treasure Hunter



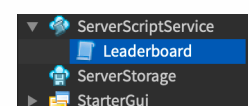
- Placing Treasures thought the map
- Touching Events
- Spawn Location in different places
- If and Else Statements
- Click Detector
- Screen GUIs in Roblox
- Multiple Places in a Single Game



Zombie Hunter



- Adding NPC character to workspace
- NPC script to attack player
- Player Controls
- Pick the map from the toolbox
- Tools picking
- Starterpack, StarterGui and Server storage options
- Leaderboard and score count scripting





Detailed HTML Curriculum



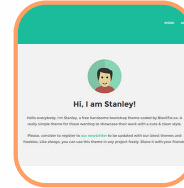
HTML Introduction



- HTML Basics
- Elements, Headings, and Paragraphs
- HTML Styles
- Adding colors
- Formating and attribtutes
- Document declaration
- HTML Tags



Gallery of Media



- Embed images into page
- Difference between src and alt Attributes?
- Embed youtube video
- Horizontal stack Images
- HTML image tag
- Setting Height, Width, and style attribute
- Animated Images (GIFs)



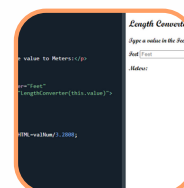
HTMI Emoji's



- HTML Character set
- why Emoji's are different from Icons and Images?
- Sizing the Emojis
- HTML Meta Tag
- Unicode Characters



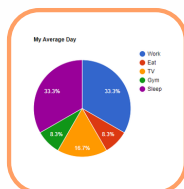
Unit conversion webpage



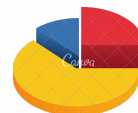
- Math Terminology
- Taking Input from the user
- Javascript function definition
- Conversion formula
- Define a Variable
- Function parameters
- span tag



Marks pie chart



- Google charts
- Javascript function
- Mouse pointer animation
- Visualization
- List and dictionary
- Math percentages



Animated Personal Portfolio



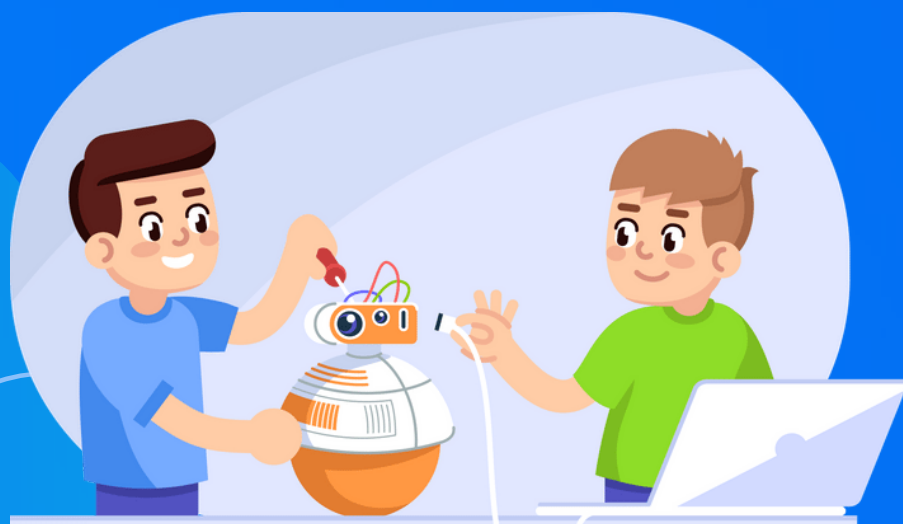
- Creating Menu
- Writing About Me
- Simple Animations
- Adding Icons and Images
- Color Effects
- Script Tag for Javascript





Come and Join with us To Experience the Fun of Building Robots

BOOK A FREE CLASS



www.roboticschools.com