

AICode101 Smart Car

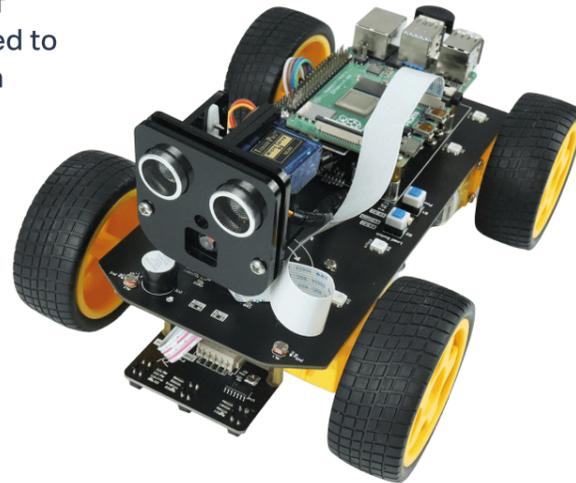
The Raspberry Pi smart car allows students to learn:

- How to integrate the Raspberry Pi and robotic hardware
- How to assemble a robot from electronic components
- How to write code on the Raspberry Pi that can interact with the camera, ultrasonic sensor, drivers, and microphone
- How to design programs to achieve line following, object recognition, obstacle avoidance, and more

The smart car is compatible with a variety of machine learning models which are designed to run on smart devices and only available with AICODE101:

- Voice commands
- Image recognition
- Video Input

Our advantage: Machine Learning Models with AICODE101



AICode101 Smart Dog

This sophisticated Robot Dog gives students the opportunity to build and control a quadrupedal robot, complete with a buzzer and programmable LEDs. Using its 4 motorized and self-balancing legs, camera module, and ultrasonic sensing, the Smart Dog can be programmed to navigate obstacles, take video, and even recognise people.

With AICODE101, students can apply machine learning to tasks such as:

- Teaching the dog to detect distances to nearby obstacles and safely avoid them
- Using computer vision to recognize objects and provide facts about them
- Tracking a moving subject and following it around a room



AICODE101 MAKERSPACE

OUR MISSION

To better prepare our young generation to thrive in an increasingly challenging and complex society in the world of artificial intelligence (AI), big data, and Internet of Things (IoT).

To provide the best AI knowledge and tools to our youth utilizing state of the art teaching methods and top-notch educators.

OUR STEM + AI CURRICULUM

L10													Machine Learning Algorithms
L9													Machine Learning Algebra
L8													Machine Learning Smart Devices
L7													Machine Learning with Big Data across Industries
L6													Machine Learning in Python with Raspberry Pi + Sensors
L5													Project-Based Python for Kids
L4													Machine Learning Scratch
L3													Coding with Devices
L2													Scratch Coding
L1													Lego & Robots
GRADE	K	1	2	3	4	5	6	7	8	9	10	11	12

MICRO: BIT

The Micro bit is an open source hardware ARM-based embedded system. It is a fun and easy way for students aged 7-11 to learn the relationship between hardware and software.

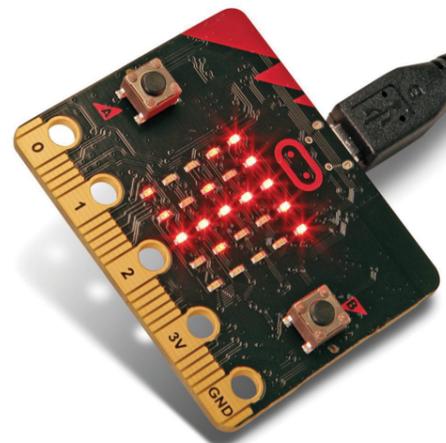
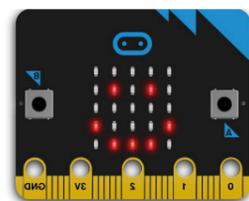
The Micro:bit device features:

- 2 programmable buttons
- 25 individually programmable LEDs
- 3 digital/analog input/output rings
- Accelerometer and Compass
- 32-bit ARM Cortex Microprocessor

The Micro: Bit can be programmed using:

- MIT Scratch
- Microsoft MakeCode
- MicroPython

Our advantage: Machine Learning Models with AICODE101



LEGO™ BOOST™ Creative Toolbox

LEGO BOOST Creative Toolbox, which includes 847 pieces and a LEGO® Motorized Hub, additional motor and a Color & Distance Sensor, is a great first step for students aged 7-12 to begin building and coding smart toys with any of 5 multifunctional models:

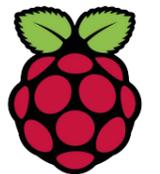
- Vernie the Robot - a moving, talking, and dancing robot
- A spring-loaded shooter
- The Guitar4000 - a musical instrument with sound effects
- Frankie the Cat - an interactive pet that plays and expresses its mood
- Auto Builder - an automated production line that builds miniature LEGO models!



Our advantage: Machine Learning Models with AICODE101

Raspberry Pi 3 B+

Raspberry Pi 3 B+ is an excellent device for learning, coding, and creating projects. The Pi Model B+ has a 64-bit quad-core processor, which is twice as fast as the Raspberry Pi 2, a perfect pairing for AI and computer vision tasks.



Raspberry Pi

Students will learn how to program using Python, Java, or C to control and communicate with various electronic sensors and components like LEDs, IR sensors, joysticks, and more. The AICODE101 platform allows students to apply machine learning in their own circuit projects. At AICODE101, we will give students the skills to create machine learning models that they can't learn anywhere else.



AICODE101 Starter Toolbox Raspberry Pi

This fantastic starter kit offers students a great opportunity to learn how the Raspberry Pi can be programmed to interact with external electronic components including sensors, motors, servos, buttons, switches, resistors, capacitors, transistors, LEDs, displays, and more.

The circuits that our students design with the starter toolbox will lay the groundwork for advanced computer programming and IoT technologies!

Our advantage: Capability to design circuits that use machine learning Models with AICODE101

