AICODE101 MAKERSPACE

OUR MISSION

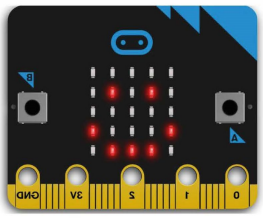
To better prepare our young generation to thrive in an increasingly challenging and complex society in the world of artificial intelligence (AI), big data and Internet of Things (IoT). To provide the best AI knowledge and tools to our youth utilizing state of the art teaching methods and top-notch educators.

OUR STEM + AI CURRICULUM

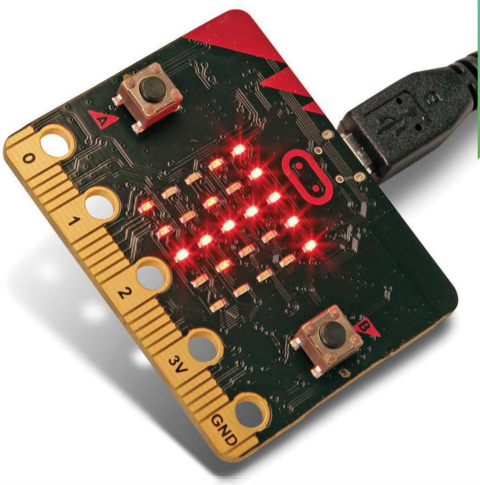
L10										Machine Learning Algorithms			
L9									Machine Learning Algebra				
L8								Machine Learning Smart Devices					
L7							Machine Learning with Big Data across Industries						
L6							Machine Learning in Python with Raspberry Pi + Sensors						
L5						Project-Based Python for Kids							
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 offers a fun and easy for young people (7-11) to learn the relationship between hardware and software.



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



The Micro: Bit can be programmed using:

- MIT Scratch
- Microsoft MakeCode
- MicroPython

Our advantage: Machine Learning Models with AICODE1O1

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 fun and easy entry for boys and girls aged 7-12 to building and coding smart toys with any of 5 multifunctional models:

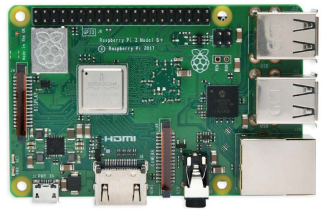
- Vernie the Robot - a moving, talking , and dancing robot
- A spring- loaded shooter
- The Guitar4000-a musical instrument with sound effects
- Frankie the Cat-an interactive pet that plays and expresses its mood
- Auto Builder-an automated production line that builds miniature LEGO models!

Our advantage: Machine Learning Models with AICODE1O1

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.

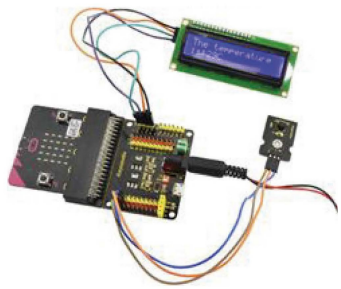
Raspberry Pi



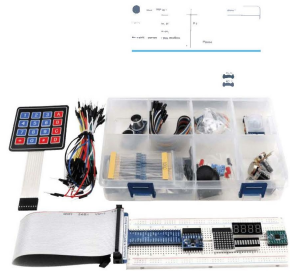
Students will learn how to program using Python, Java or C to control and communicate various electronic sensors and components like LED lights, IR sensors and Joysrick, etc.

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 oppurtunity to learn how the Raspberry Pi communicates in Python, Java and C to its GPIO port and external electronis like Sensors, motor, stepper motor, servo, buttons, switches, and LEDs as well as resistors, capacitors, and transistors.



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

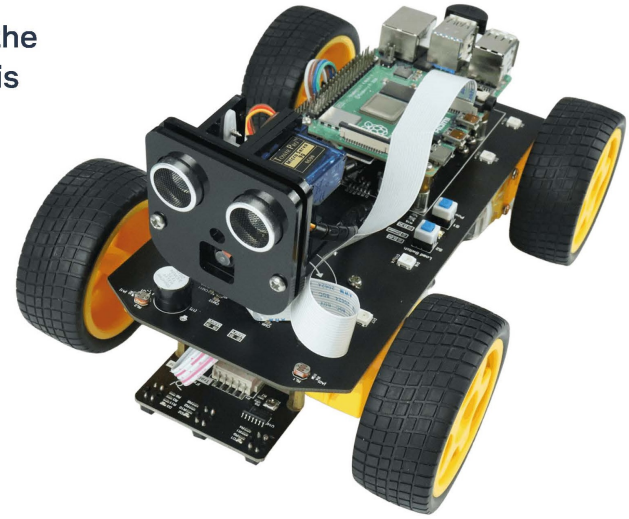
AICode101 Smart Car

This smart gives students to learn:

- How to integrate the Raspberry Pi and robotic hardware.
- How to assemble a robot from lots of pieces.
- How to connect wiring between the Raspberry Pi and robot.
- How to write software for the Raspberry Pi that explains how to control things like the camera, ultrasonic sensor, drive motors and microphone to achieve Light Tracing, Line Tracking, Obstacle
- Avoidance and more.

Machine learning models are integrated in the hardware coding with this smart car, which is only available with AICODE101 with

- Voice commands
- Image recognition
- Video Input



Our advantage: Machine Learning Models with AICODE1O1

AICode101 Smart Dog

This sophisticated Robot Dog gives students the opportunity not only to build a walking robot dog using 4 motorized and self-balancing legs, but it algo offers so much more. Apart grom the flashing LEDs and high pitch buzzer it has video and ultrasonic detection like the eyes. It has a camera onboard which you can program to take video, pictures and even recognise people.

With AICODE101, students can build machine learning models, such as:

- Using a camera to teach the dog to avoid obstacles
- Using computer vision to recognize facts and to follow objects!
- Basic to intermediate circuit building