Robotics & Programming Programs
School & University Students

1- Robot Programming (Scratch, C Language, Python)

Overview

CoSpace Robot platform has benefited over 100,000 users in over 50 regions worldwide, Used by schools in more than 20 countries UK, Germany, Austria, Sweden, Japan, China, Iran, Mexico, Brazil...etc.

Cospace Program (Graphical programming and C language, Scratch, Python+)
In CoSpace course, student will develop and program appropriate strategies for virtual autonomous robots to navigate through the virtual worlds, CoSpace has two categories (Rescue & Auto Driving Robot) , school and university students are using a graphical programming interface or C language.

The student will learn: (Basic Level)
(Age: 7 – 19 Years Old)

VIRTUAL ENVIRONMENT

MANUAL CONTROL OF VIRTUAL ROBOT

INTRODUCTION TO VIRTUAL PROGRAMMING

PROGRAM ROBOT ACTION (MOVE "Forward – backward – Swing Turn – Point Turn")

WORKING WITH ULTRASONIC SENSOR (Sensing Distance and Do Action)

WORKING WITH COLOUR SENSOR (RGB Color Model)

OBJECT DETECTION and DEPOSITION (Timer and Color Sensor)

WORKING WITH IR SENSOR (LINE FOLLOWER ALGORITHM)

This course is a good introduction for Students interested in Robotics; this course will empower students to participate in iCooLChallenge, RoboCup Junior & RCAP Competitions.
Advanced Level will be According to the category.

Check Video of International Competition:
https://drive.google.com/file/d/17v7F0bQiFXmaliej0Q7DWPClzDRsOB4G/view?usp=sharing

what is iCooLChallenge Videos?
https://drive.google.com/file/d/1AKvJGBsF6F3xd2OR4KUVh3lrDjTfe5Wl/view?usp=sharing

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2- <u>MIT App Inventor</u>

Overview
3-
MIT App Inventor is a high-level block-based visual programming language, originally built by Google.
It allows newcomers to create mobile applications for two operating systems: Android and iOS.

MIT App Inventor: Beginner (Level 1)
(Age: 9 to 15 Years Old)

The student will learn:

- ✓ Introduction to Mobile Application.
- ✓ Introduction to App Inventor and its User Interface.
- ✓ Labels, Buttons, Pictures and Text Box User Interface Tools and it`s properties and different between them.
- ✓ Check Box User Interface Tool and it`s properties.
- ✓ List View User Interface Tool and it`s properties.
- ✓ Date & Time Picker and it`s uses.
- ✓ Layout Uses and properties of the screen.
- ✓ App Inventor Blocks
- ✓ Use Variables.
- ✓ Conditional/comparison Operators
- ✓ Introduction to Database
- ✓ Make mobile application and upload to play store.

This course is a good introduction for Students interested in Mobile Application Development.