Syllabus - Robotics for kids Program

Day1 - Introduction to Robot Technology
- The main purpose of robots
- Types of Robots

Day 2 - The Evolution of Robots

Day 3 - Basic electronics for beginners
- What is an Electronics?
- How does electricity light a bulb?
- Basic Electronics Components

Day 4 - STEM Projects (part 1)

Day 5 - STEM Projects (part 2)

Day 6 - Practical Electronics Tinkercad
- How to use Tinkercad to design electronics circuits
- Use Circuit Construction Kit to light up the bulb

Day 7 - Introduction to Code.org (Coding for Kids) Programming
- How to use this Spirits Lab and Projects

Day 8 - Introduction to Scratch Programming
- Scratch 3 - Introducing Interface with Visual Development Environment

Day 9 – Scratch Programming part 2
- How to use control structures in the Scratch programming?
- Creating robots using scratch programming

Day 10 – Scratch Programming part 4
- Making animation, games, stories etc. scratch projects
- Creating video sensing (webcam) projects

Day 11 - Scratch Programming part 3
- 10 Extra activities - Creating robots

Day 12 - Introduction Magicbit and MagicCode

Day 13 - MagicCode activities (part1)
- Introducing MagicCode Interface
- How to use MagicCode firmware
- Magicbit extension and blocks for MagicCode
- Activity - Blinking a LED

Day 14 - MagicCode activities (part2)
- Changing brightness of a LED
- Reading an analog signal
- Generate tones from the buzzer

Day 15 - MagicCode activities (part3)
- Turn a LED on/off from the input of a push button
- Display text on the OLED screen

Day 16 - MagicCode activities (part4)
- Operate servo motor
- Change colors of the RGB LED
  Measure temperature and humidity by sensor

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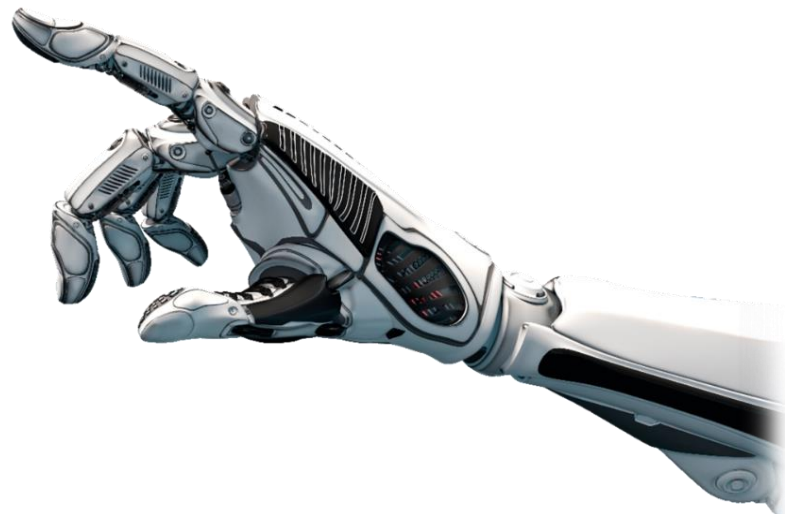
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