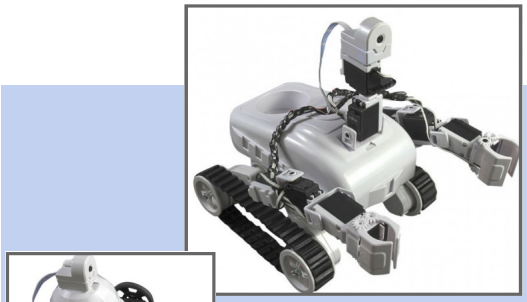
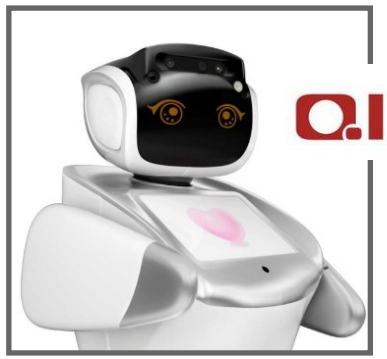
"Thank you so much for teaching my son in your camp for the past two weeks. He definitively enjoyed it and got a lot out of it. He was so excited to talk about his new robot. We hope to get another chance for him to learn more from you in the future."

- Proud Mom of Julian K.



EZ-ROBOTS



QIHAN

Robo-Geek Inc. is a proud reseller of EZ-Robots & Sanbot Elf

Promoting STEM

Imagine Think Create (iTC)

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ROBO-GEEK

Coding, Electronics & Robotics

Who We Are

Robo-Geek is a technology company founded by engineers to promote STEM, with the aim to foster students' confidence and "**I Can do it**" attitude.

Our staff consists of ***passionate engineers*** who have carefully designed all the courses to ensure the best learning experience for each student.

Our courses are designed for students in grade 1 through 12 to introduce them to the fundamentals of **Coding, Electronics and Robotics**.

Each course includes hands-on work with computers, electronic boards, robots and unique labs that encourage self-learning and experimentation.

Our advanced courses submerge the students in exciting subjects of **Game Programming, Computer Vision and Swarm Robotics.** Students are encouraged to experiment and ***unleash their imagination.***

What We Offer

- **After School Clubs.** Our **Online STEM Club** and **Online Robotics Club** introduce students to different subjects in science, technology, engineering and math while expanding their knowledge of coding, robotics and building great presentation skills.
- **Virtual Summer & Winter Camps.** Fun, interactive virtual camps focus on STEM activities with emphasis on robotics and coding.
- **ROS and Ubuntu.** Advanced robotics using Ubuntu and ROS (Robotic Operating System) for universal robots.
- **Sanbot Elf Courses:** Not offered anywhere else, students will learn hands on to make Apps for Android Tablets and for Sanbot Elf robot using Android Studio.
- **Workshops.** Over 25 different workshops in robotics and coding workshops for school and teachers.
- **Great Flexibility.** We work with parents and teachers to fit their life-style and schedule. If a student misses a class, we will organize a catch up class at no extra cost.
- **Continuous Innovation.** Leading edge of technology. We pride ourselves in the development and continuous innovation of our unique labs.

ROBO-GEEK ONLINE COURSES

LEVEL 1

RG-100: Intro to Coding

Students will learn the basics of programming using Scratch including introduction of variables, conditional statements and iterative loops. Our lessons are designed to challenge students to think creatively and to quickly develop their logical skills. .

Pre-requisite: Students must be able to type 3 words per minute and be able to use the mouse.

RG-120: Intro to Python

This course is especially designed for young coders making the transition from blocks type coding to scripts type coding using Python. Our lessons are designed for students to learn fundamentals coding while building confidence in their abilities to troubleshoot and work with more complex code.

Pre-requisite: RG-100 or must be able to demonstrate advanced knowledge of Scratch

LEVEL 2

RG-200: Intro to Python – Practical

Students will be introduced to Python programming language. Python is a high-level programming language used in many universities and work institutions. Python is powerful and fast, yet friendly and easy to understand. Students will learn the fundamentals of coding using Python Turtle.

Pre-requisite: RG-120 or successful evaluation to start at Level 2

RG-220: STEM + Python Turtle

Students will learn about three STEM subjects: Solar System, Bridge Building and Gravity. For each subject, students will create programs in Python to simulate and demonstrate understanding. This course is based on the material developed in our STEM Club.

Pre-requisite: RG-200

RG-250: Intro to Game Programming Pygame

Students will learn step by step how to develop a working 2D game from designing characters, game rules and developing multiple game levels. In this course students will be introduced to Object Oriented Programming using Python Pygame. Games are highly portable capable to run on nearly every platform and operating system.

Pre-requisite: RG-220

RG-280: Advanced Game Programming

Students will develop a multi-level game using Pygame using Object Oriented Programming integrating all the concepts learned in RG-250

Pre-requisite: RG-250

ROBO-GEEK ONLINE COURSES

LEVEL 3

RG-300: Intro to Arduino

Students will learn coding in C with Arduino Uno Wi-Fi Board working with digital interfaces to control different arrays of LEDs virtually using TinkerCad. Moreover, students will learn basic concepts of Electronics and Electricity through experimentation and hands-on activities including building of circuits on breadboards.

Pre-requisite: Level 2 courses

RG-350: Arduino Advanced

Working with simulators is a fundamental skill required in Engineering to develop troubleshooting and collaboration skills. Moreover simulators help students develop discipline to conduct tests prior to prototyping. We selected TinkerCad for this purpose. In addition can continue practicing at home as they will have their own accounts.

Pre-requisite: RG-300

LEVEL 4

RG-450: Intro to Computer Vision

In this course, students will learn about the fundamentals of Computer Vision using Python OpenCV. This course is designed to prepare students for more difficult and concepts in robotics and machine learning.

Pre-requisite: RG-400

RG-460: Intermediate Computer Vision

In this course students learn how to apply advance algorithms using OpenCV for image processing including shape detection and object detection.

Pre-requisite: RG-450

RG-480: Advanced Computer Vision Part I

This course teaches students practical applications of computer vision in robotics and mobile applications such as QR code recognition, OCR recognition. Last part of the course focuses on integration with the application of AI to play checkers.

Pre-requisite: RG-460

RG-480: Advanced Computer Vision Part II

This course teaches students practical applications of computer vision in robotics and mobile applications such as QR code recognition, OCR recognition. Last part of the course focuses on integration with the application of AI to play checkers.

Pre-requisite: RG-480

ROBO-GEEK ONLINE COURSES

LEVEL 5

RG-500: Advanced Coding C#

Students will learn C# (C Sharp) using Visual Studio. Students will learn Visual Studio with C# , they will write code and learn about variables, Loops, Conditional Statements, how to use classes. They will learn how to troubleshoot in C#, they will have to write their own code and methods to complete challenges.

Pre-requisite: Level 4 courses

RG-520: Advanced Coding C# Part II

Students will learn advanced programming techniques using Visual Studio using C#. Students at this level will be working independently on projects : Creating Forms, Drawing Shapes and Bingo APP; they will have to add and supported by the instructor.

Pre-requisite: RG-500

LEVEL 6

RG-600: Intro to AI - Chess Master

Students will learn the foundations of artificial intelligence by developing a chess game AI. The course starts with understanding the fundamental of chess game, followed a step by step approach to building AI code using Python Tkinter.

Pre-requisite: Level 5 courses

RG-650: Intro to Self Driving Car

In this course, students will learn fundamentals of Self Driving cars using Python OpenCV from detecting cars, traffic lights and lane detection.

Pre-requisite: Level 5 courses. RG-600 Preferred.

LEVEL 7

RG-700 Advanced Coding: Java

Students will learn fundamentals of Java, type of variables, statements and operators, arrays, methods, and control structures.

Pre-requisite: Level 6 courses

RG-710: Advanced Coding: Advanced

This course will expand Object-oriented programming System (OOPs) concepts. We will cover each and every feature of OOPs in detail : Abstraction, Encapsulation, Inheritance and Polymorphisms. The section for Input /Output has included here too.

Pre-requisite: RG-700

ROBO-GEEK ONLINE COURSES

LEVEL 7

RG-720: Advanced Coding: Android Studio

Android Studio is a powerful tool based on Java. Students will learn how to work with API (Application Programming Interfaces), Project Structure, gradle, libraries, methods, onCreate() method, MainActivity and XML Layout. Students will learn how to create Apps for Android Tablets using Android Studio. **Pre-requisite**: RG-710

RG-750: Advanced Coding: Android Studio with Sanbot Elf

Students will learn how to work with API (Application Programming Interfaces), Project Structure, gradle, libraries, methods, onCreate() method, MainActivity and XML Layout. Students will learn how to different managers to control Sanbot Elf robot. **Pre-requisite**: RG-720

RG-780: Advanced Coding: Android Studio with Sanbot Elf II

This is an advanced course where students will learn how to create more complex Apps in Android Studio for Sanbot Elf robot. They will make a 6-memory card game and 20 cards-memory game having only the description of the most important blocks of code. The students will work with Face Recognition App too. **Pre-requisite:** RG-750

LEVEL 8

RG-800: Advanced Robotics: ROS-1

Students will learn Unix commands, scripts and editors in Ubuntu 16.0 and the fundamentals of ROS (Robot Operating System), ROS packages, manifests, ROS nodes and topics and messages. Libraries covered Turtlesim and TurtleBot 2.

Pre-requisite: Completion of Level 7

RG-820: Advanced Robotics: ROS-2

Students will learn about different kind of robots in ROS: Turtlebot 2 and Turtlebot 3. Then students will create and build ROS packages, design robots using URDF. Robots will be simulated in Gazebo.

Pre-requisite: RG-800

RG-850: Advanced Robotics: ROS-3

Students will learn Robot Design with Xacro Files controlling Robotics Arm. In the second part students will install Ubuntu and ROS in RPI (Raspberry PI)

Pre-requisite: RG-820

RG-880: Advanced Robotics: ROS-4

Students will work inside ROS to communicate RPI with client. Students will learn Python code to subscribe and publish their cameras. RPI simulates a Robot.

Pre-requisite: RG-850