Brochure

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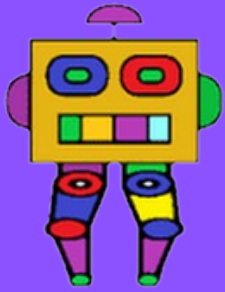
🌐 **www.robotmanacademy.com**

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About Us

Robotman Academy is a leading provider of robotics and coding programs for both primary and high schools. With a focus on Arduino, C++, Scratch, and electronics, we offer hands-on learning experiences that inspire students to explore the exciting world of technology. Join us today and unleash your potential!

ROBOTMAN ACADEMY ONLINE

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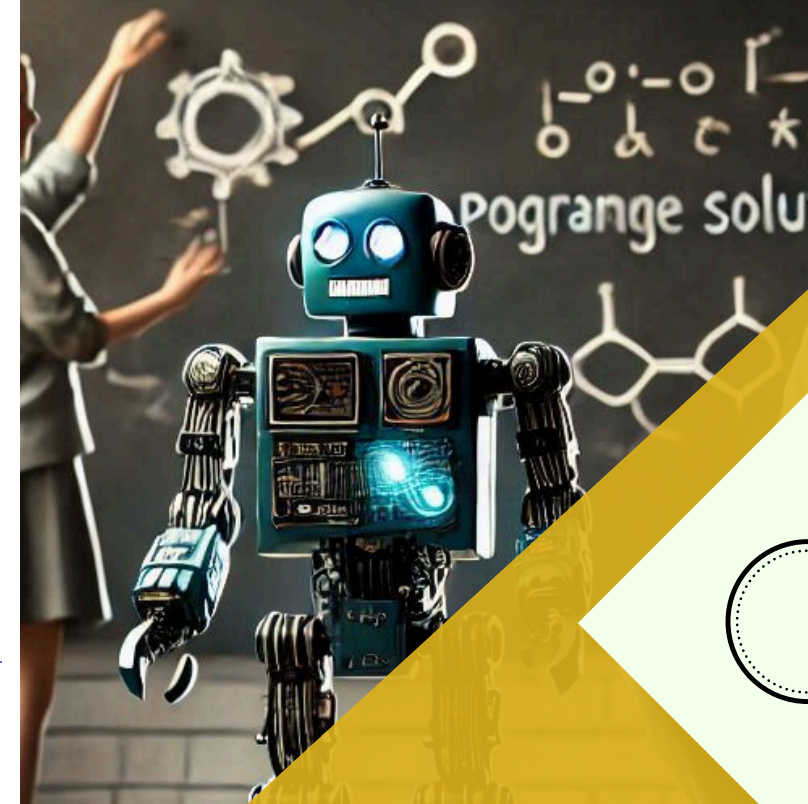
Our Online Courses

1. **Scratch Coding 4kidz**

   Age Recommended 8-13

   R350.00 Once-Off

2. **Micro-Bit Robotics 4kidz**

   Age Recommended 8-13

   R350.00 Once-Off

3. **Computer Programming For Robotics**

   Age Recommended 14-18

   R350.00 Once-Off

4. **Robotics(RM01)**

   Age Recommended 14-18

   R350.00 Once-Off

Vision

At ROBOTMAN ACADEMY, we envision a future where every primary and secondary student in South Africa has access to cutting-edge robotics education, empowering them to become the innovators and problem-solvers of tomorrow.

Mission

Our goal is to inspire young minds to embrace the world of robotics, enabling them to thrive in a rapidly evolving digital world and make meaningful contributions to both their communities and the global tech landscape.

Scratch Coding 4kids(R350.00)

Online Course

### 1. What is Scratch Coding?

Scratch coding is a visual programming language and platform designed to make it easy for beginners, especially children, to learn the basics of programming and computational thinking.

2. Why Learn Scratch Coding?

Encourages children to think creatively and solve problems through design and debugging.It introduces fundamental concepts like loops, conditionals, variables, and events in an easy-to-understand way.

3. Course Outcome

Scratch is a versatile platform where you can bring your creative ideas to life by designing interactive games, animations, and stories. It allows you to build simulations, compose music, and create art projects using an intuitive block-based coding system. Scratch is perfect for educational purposes, enabling you to develop quizzes, lessons, or visual experiments. With its user-friendly interface, it teaches programming concepts like loops, conditionals, and variables, making it ideal for beginners and young learners.
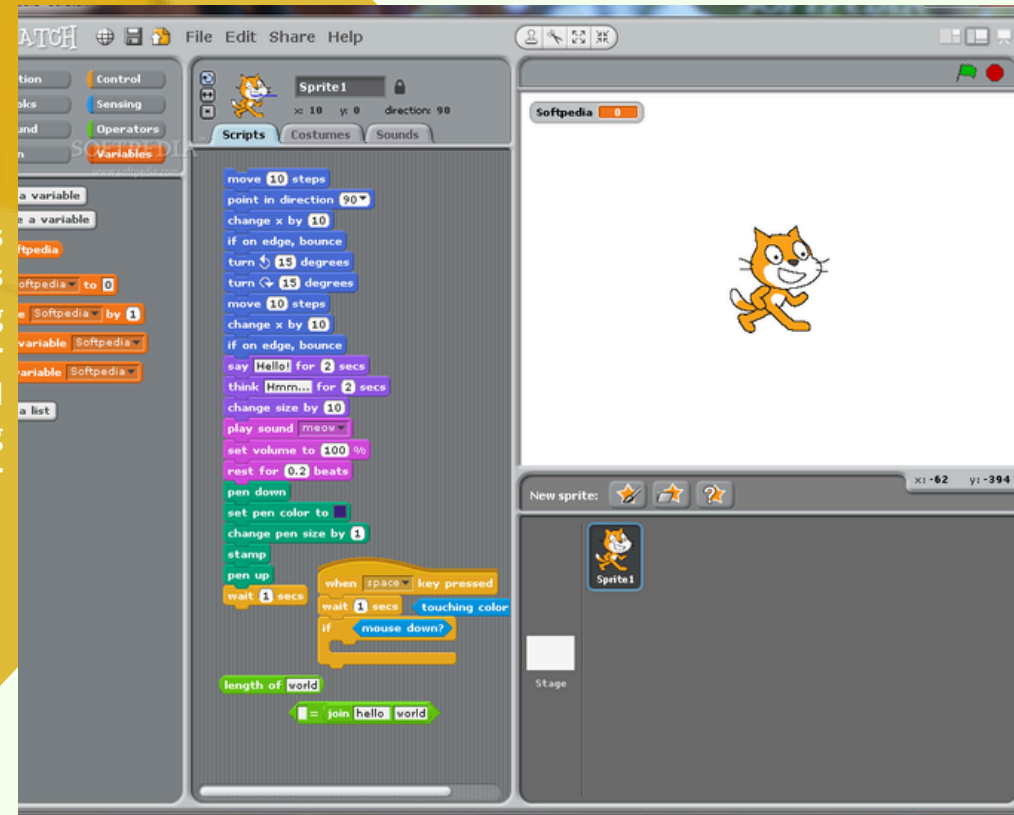
Micro-Bit Robotics 4kids(R350.00)

Online Course

1. What Micro-Bit Robotics?

It is a beginner-friendly platform that introduces concepts of robotics, electronics, and programming in a fun and engaging way. The Micro:bit board is equipped with built-in sensors, buttons, a display, and Bluetooth capabilities, making it a versatile tool for robotics education and projects.

2. Why learn Micro-Bit Robotics?

- Simple and Intuitive: Micro:bit is beginner-friendly, making it ideal for introducing complex robotics concepts in an accessible way.
- Hands-On Experience: Learners build real-world projects that combine hardware (motors, sensors) and software (programming logic).
- STEAM Education: Integrates science, technology, engineering, arts, and math into one practical learning platform.

3. Course Outcome

- Learn how sensors, motors, and actuators work and how to integrate them into robotic systems.
- Understand the principles of electronic circuits, including input and output connections.
- Explore the mechanics of movement, such as wheels, servos, and gears.

Programming for Robotics(R350.00)

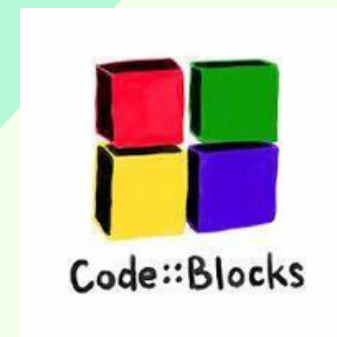# Online Course

1. What is Programming For Robotics?

refers to programming robots using the Arduino platform and the C++ language. Arduino is a popular open-source electronics platform that uses microcontrollers to interact with hardware components. C++ is the primary programming language for Arduino, making it an excellent choice for robotics projects due to its performance, flexibility, and control over hardware.

2. Why Use C++ with Arduino for Robotics?

- **Direct Hardware Control: C++ allows precise control of hardware components like sensors, motors, and actuators connected to the Arduino.**
- **Efficiency: Programs written in C++ execute efficiently on the limited resources of microcontrollers.**
- **Modularity: Object-oriented programming (OOP) in C++ enables clean, maintainable, and reusable code structures.**
- **Rich Libraries: Arduino's extensive library ecosystem simplifies interfacing with various robotic hardware.**

3. Course Outcome

- **Programming Mastery: Develop skills in variables, loops, functions, and object-oriented programming.**
- **Hardware Control: Interface with sensors, actuators, and microcontrollers for robotic applications.**
- **Algorithm Design: Create efficient algorithms for navigation, motion control, and obstacle avoidance.**
- **Real-Time Systems: Implement responsive and time-critical operations.**
- **Problem-Solving: Debug and optimize robotics software**

Code::Blocks

ROBOTICS RM01 (R350.00)

Online Course

1. What is ROBOTICS RMO1 ?

The development of more complex robotic systems, such as obstacle-avoiding robots, robotic arms, and autonomous navigation systems.

2. Why learn ROBOTICS RMO1 ?

Learning Arduino robotics offers numerous benefits, especially for those interested in electronics, programming, and robotics. Here's why it's worth investing time and effort into learning it:

Hands-On Learning Experience
- Practical Application: Arduino provides a hands-on approach to learning electronics and programming. Building real robots helps solidify theoretical concepts.
- Build and Test: You can quickly create prototypes, test them, and iterate, giving you immediate feedback on your learning.

Foundation for Robotics and Engineering
- Understanding the Basics: Learn essential concepts such as sensor integration, motor control, and real-time programming, which are crucial for any robotics project.
- Versatile Skills: Gain skills that can be applied to more advanced robotics platforms and projects.

3. Course Outcome

- Movement Control: Understand and implement motor control techniques, including PWM, for robot movement and precise actions.
- Sensor Usage: Learn how to use various sensors (e.g., ultrasonic, infrared) for obstacle detection and environmental interaction.
- Autonomous Robotics: Build robots with autonomous behavior, such as obstacle avoidance and line following, through sensor integration and programming.
- Electronics Fundamentals: Gain foundational knowledge in circuits and electrical components essential for robotics.
- Project Development: Create and optimize robotic projects, from simple prototypes to more complex systems.
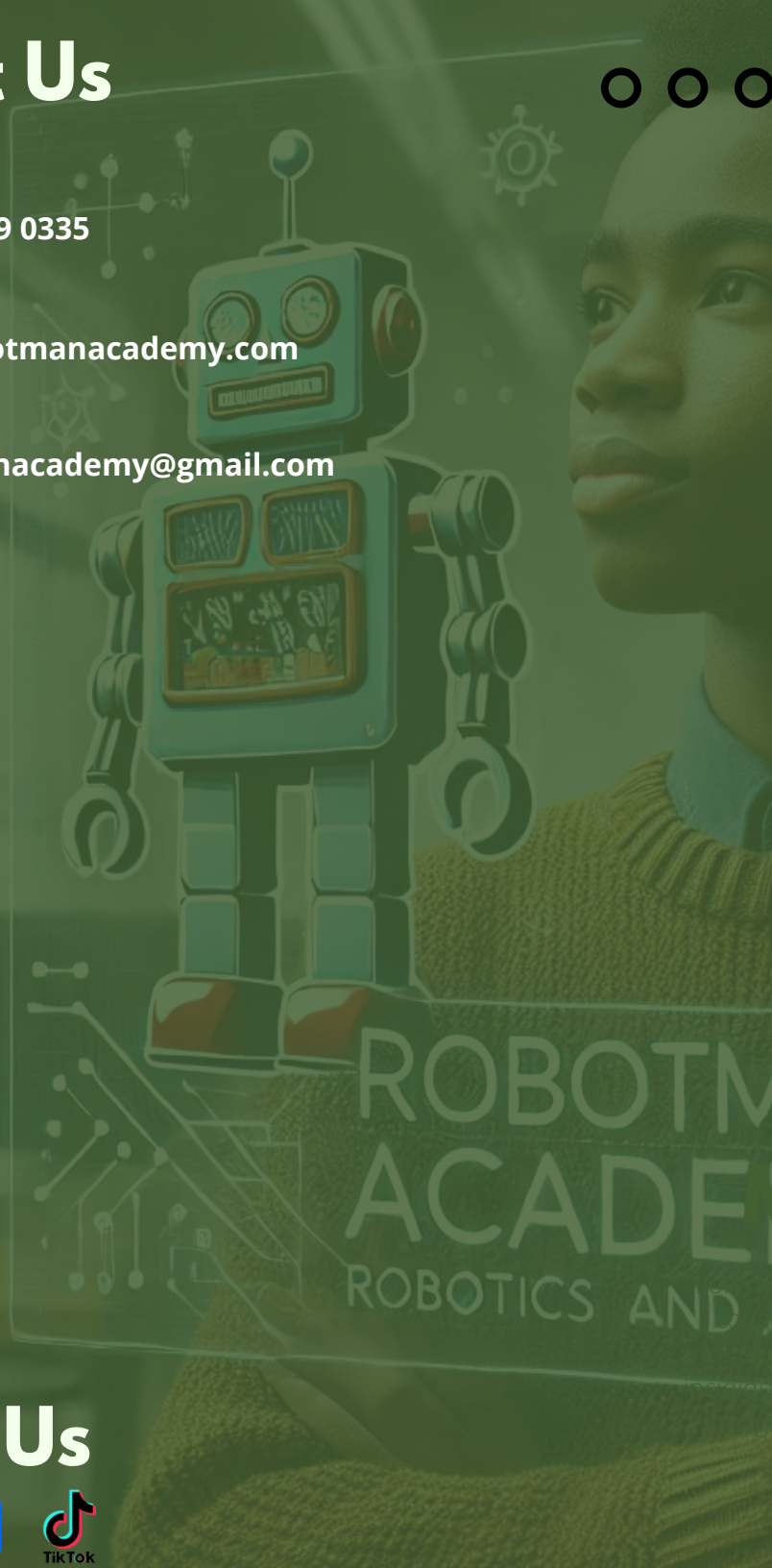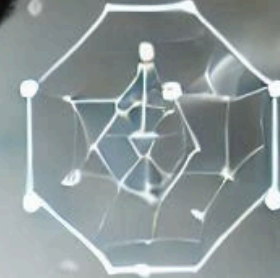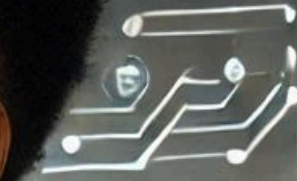
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