When children build, they don't just make robots—they build confidence, skills, and their future.

The Dirb Academy

Why This Matters

Introduction: Preparing Students for Tomorrow

The world is moving towards **automation, robotics & AI**.

Children who learn robotics early develop essential skills that will define their future success.

- **Problem-solving**
- **Logical thinking**
- **Hands-on creativity**
- **Confidence to build real machines**

These projects make learning **fun**, **practical**, and **future-oriented**.

What Will Your Students Learn?

Technical Foundations

- Basics of sensors, motors, and microcontrollers
- Introduction to Arduino programming

Real-World Applications

- Understanding robots in real-world situations
- Concepts of automation, logic, and engineering design

Essential Skills

- Teamwork, time management, and innovation mindset
- Turning ideas into working prototypes

After This Competition, Your Students Will Be Able To:

01

Build fully working robots from scratch

02

Understand how machines sense the world

03

Use coding to control movement and behaviour

04

Solve problems with engineering thinking

05

Present and explain their project confidently

06

Think like young innovators and creators

Project 1: Line Follower Robot (Space Mission Theme)

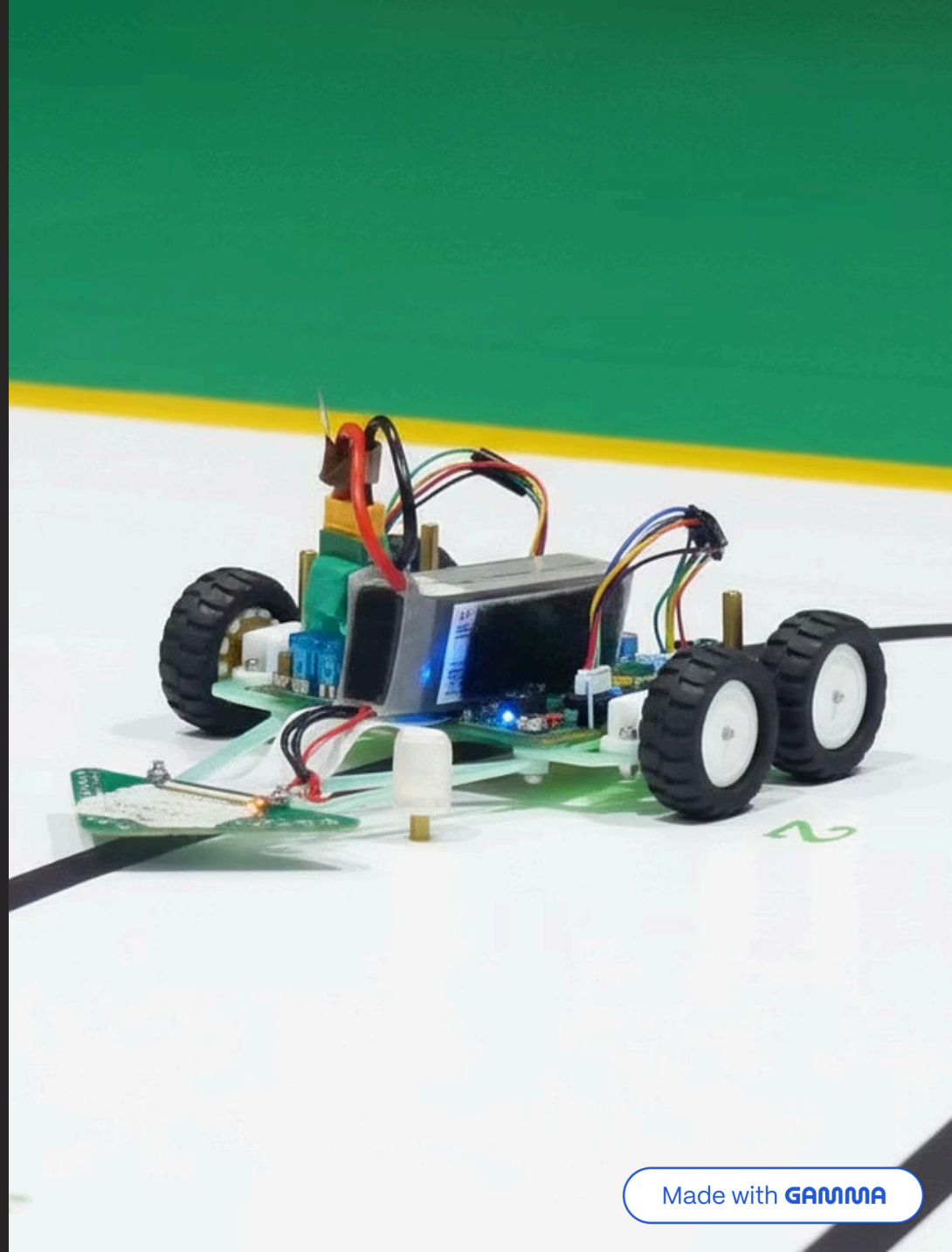
Concept: A robot that follows a track using IR sensors and performs a "space rescue mission."

Student Experience:

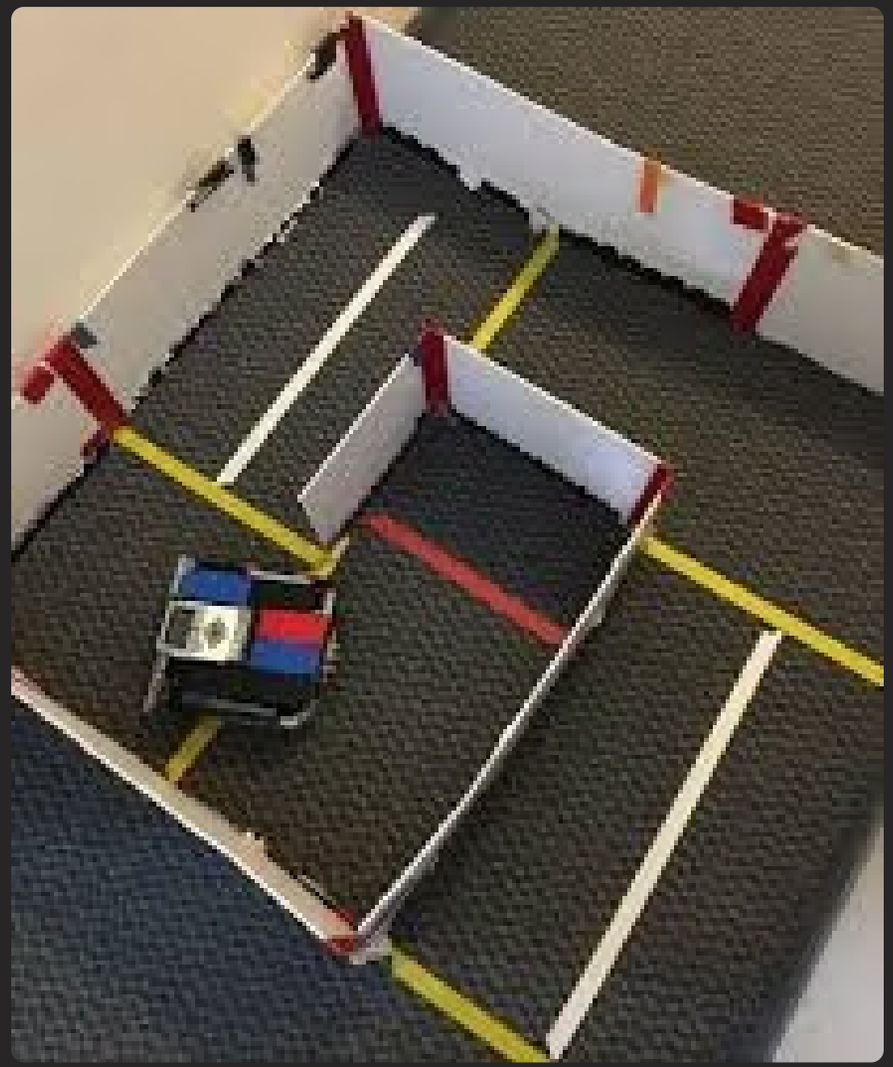
- Understand IR sensing
- Programme motors for accuracy
- Learn how automation works in space rovers

Mission Theme Examples:

- Deliver oxygen cylinders to a "moon base"
- Circle Earth "orbit" and land at the station
- Reach checkpoints with precision



Project 2: Maze-Solving Robot



Concept: A robot that detects walls using ultrasonic sensors and finds its way out.

Skills Learned:

- Decision-making logic
- Sensor integration
- Real-world analogy: rescue robots during disasters

Fun Factor: Students compete to see who escapes the maze fastest.

Project 3: Gesture-Controlled Robot

Concept

A robot controlled by hand movements using an accelerometer glove.

Skills Learned

- Wireless communication
- Motion sensing
- Robotics + wearable tech

Appeal

Feels like **Iron Man**, very exciting for school kids.

Project 4: Fire-Fighting + Line-Following Combo

Concept: A multi-purpose robot that follows a line to reach a "fire zone," picks objects or pushes obstacles, and extinguishes a small LED-based fire.

Skills Learned

- Multi-sensor coordination
- Robotics + real-world safety tech
- Mechanical design + logical flow

Appeal

A compact model of smart disaster-response robots.

Why This Competition Is Special

School-Focused Design

Designed specifically for **school students**

Engaging Learning

Hands-on + fun learning experience

Perfect Balance

Simple enough to understand, advanced enough to impress

Real Engineering

Real engineering exposure at a young age

Collaborative Spirit

Encourages creativity, innovation & teamwork

Lasting Confidence

Students take home the confidence: "I can build robots too!"

Give your students a platform to explore, create, and innovate.

This competition is not just about robots—it is about building thinkers, problem-solvers, and future leaders.

Let's build the next generation of innovators together.