

Robotics, a hit with city kids

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Rakshith Reddy, 14, can barely tear himself away from tweaking his new gizmo. Visibly excited, he says, "I am replacing the wheels on my bot to make it move faster. The programming language is easy and I grasped it quickly. My robot has an embedded 'touch sensor,' which can feel the wall and move about. A sound sensor is fitted as well. Every time I say something, it responds to the programmed command on the computer."

Says Prateek Rebala, a

class X student, "We have a host of robots to build. One robot will be able to chuck things, another will be able to grip things and take autonomous, pre-programmed commands. One will bypass obstacles using infrared messages. The biggest attraction, however," he says, smiling, "is going to be the battle between the robots. Robots will play a simulated football game without any extraneous commands."

Students tinker around with robots at a camp held in the city



Deccan Chronicle Pg-19 (28-04-10)

How to build a robot from scratch

NT Balanarayan. BANGALORE

How can a child program and build a robot on his own? This was one of the many questions Gagan Goyal, founder of Robo.in wanted to address when he started the company, a division of ThinkLABS, incubated at SINE, IIT Bombay. Now they have a solution in the form of a simple software: a robot development kit and a one-week camp that he thinks can help jump-start kids who're interested in robotics.

The company will be organising a robotics camp in Bangalore starting April 12 in association with Reliance World and will try to demystify robotics. "Besides introducing participants to Robotics, the camp will elucidate many principles of science and mathematics through interesting demonstrations and hands-on robot building sessions," says Goyal, an IIT Bombay alumnus.

Spread over six days and certified

by the Indian Innovators Association, the camp will provide hands-on exposure to robot programming using hardware and software. Participants will spend two hours every day building and programming robots using kits provided by the company. Depending on the type of program they choose, at the end of the camp, the children would be able to take home the robot they build. Participants will also be eligible to enter the National Robotics Competition to be held in IIT Bombay. The champion will win a trip to NASA.

Robo.in was started with a goal of introducing children to robotics and has reached out to more than 1,300 students and worked with more than 14 schools within one year of launch. Goyal says that he was a robotics buff when he was in college and used to travel abroad for competitions. "When I went abroad I met kids with great solutions who were competing against us; they had the knowledge-



base and equipments that we didn't have. I started ThinkLABS to popularise robotics here," he says.

The camp will be organised in two separate categories, Junior (for students in classes 3,4,5 - Rs4,999) and Senior for kids who are above that age

group (Rs7,499). While those in the junior group will be taught how to make robots that can be controlled via remote, those in the senior batch will be taught how to create robots that use AI (Artificial Intelligence) to guide themselves.

WHAT'S IN IT

- One Programmable Unit (Capable of controlling 4 motors and 6 sensors at a time with LCD interface)
- Programming cable/unit
- Two IR Analog Distance Sensor
- One sound sensor
- One touch sensor
- Two compact geared DC motor
- More than 50 mechano parts for building robot structure
- Fasteners, coupling and Bush for connecting parts
- Tools such as philips screw, spanner etc
- CD containing starter guide and robot programming software

Robocamp for school students



■ A student holding a model at the robotics camp at Reliance World Store in Chandigarh on Wednesday. HT PHOTO

HT Live Correspondent

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CHANDIGARH: Reliance World, in association with robo.in started Robocamp, a summer camp that aims to introduce school students in Classes IV to XII to the world of Robotics on Wednesday.

First phase of the camp started at the Reliance World Store in Sector 9 and will continue till June 5. Subsequent batches of Robocamp will continue in the city till June 19 at Reliance World Stores in Sector 9 and

Sector 35.

Robocamp aims to introduce students to Robotics technology, which is poised to bring about radical changes in many disciplines, including manufacturing, surgery, services, nuclear technology, research, artificial intelligence, aviation.

The camp intends to teach students the principles of Science and Mathematics through Robotics, and make learning fun-filled and interactive.

Robotics allows young minds to develop invaluable skills such

as problem-solving, logical reasoning, critical thinking and creativity skills.

Sunil Buch, head, marketing and broadband group, Reliance Webstore Limited, said, "Reliance World has always leveraged technology. It reaches to bring innovative services to virtually every neighbourhood of the country. With Robocamp, we wish to spark an interest in Robotics among students at an early stage in big cities as well as small towns and equip them to take up this discipline in later years."



रोबो
कैम्प

चंडीगढ़ सेक्टर- 9 स्थित रिलायंस वर्ल्ड में बुधवार को रोबोडॉट इन आईआईटी बॉम्बे के पुराने विद्यार्थियों ने रोबो कैम्प का आयोजन किया। इसमें स्कूली बच्चों ने रोबोट बनाने की शुरुआती जानकारी हासिल की।

LESSONS IN ROBO-TRICKS

Robotics camp in city hopes to generate interest in the subject among both, children and schools alike

PICS: RANA CHAKRABORTY



A group of kids showcase the robots created by them during the camp (Right) Others play a game of football with a remote

LEKHA MENON

Ten-year-old Pranav Pandya is oblivious to his surroundings as he presses a remote and steers his small mechanical 'kicker' to nudge a ball into a replica of a goalpost drawn on a large plastic sheet.

At the other end, his opponent Aryan Sharma, also 10, is matching him kick for a mechanical kick as he tries to get his own ball into the faux goalpost. The battle goes on for a while before Pranav finally manages to drive his ball in within the stipulated time, the remote being his choice of weapon.

Both Pranav and Aryan are practising furiously for a football - rather robot-ball - competition being held as part of the culmination of a week-long experiment with children and robotics. Held by Reliance World and Robo.in, a division

of ThinkLABs, an organisation incubated at IIT Mumbai, this is part of a larger initiative to draw children into the world of robots.

Similar workshops are being held in over 25 cities apart from Mumbai which will go on till June 12 when most schools reopen.

Robocamp, in the words of Gagan Goyal, IITian and founder of ThinkLABs, is all about giving kids a chance to learn robotic technology in a fun way. "We have been working on this for the last two years and had launched it as a pilot project last year. But this time, through this camp, we are travelling to different cities and taking it to the public," says Goyal.

The final objective, he adds, is to make the subject an integral part of the curriculum and set up robotic labs in schools across the country. A few schools in and around Mumbai

have already been pilot-tested for the same with one Colaba institution reportedly planning to set up a lab this year.

"When we can have mathematical and science labs then why not for robotics?" asks Goyal, adding, "At least they can have it as an optional subject."

Certified by the Indian Innovators Association (IIA), the camp demystifies robots for the young ones.

Devised for children between the age group of 8-11 and 12-16 years, initially kits comprising electrical and mechanical building blocks and necessary tools to build robots are presented.

This familiarises kids with the basic mechanics involved. They are then taught various principles behind building and operating a robot.

Dadhichi Shukla, a technical associate with Robo.in and trainer at the camp says, "It also

helps them increase their logical skills, critical thinking faculties and understand and apply theories outside the classroom." To make the topic even more appealing, ThinkLABs wants to go international this year. Later, during Diwali vacations, the National Robotics Competition (TRICKS) will be held at IIT Mumbai and the winner will be sent on a trip to NASA.

"NASA has excellent robotics education programmes. What better way to give children international exposure than send them there?" says Goyal.

While that may be some time away, the idea certainly excites the new-age aspiring scientists born and bred on a regular diet of sci-fi movies. As Sunaina Chatterji, 9, puts it, "All you need is a few wires and connectors to get things working. Hopefully this will help me live my dream of travelling in a time machine some day."

MAGNIFICENT MACHINES

Some of the robots built by the kids:

- **Gripper:** Functions like the human arm, used to hold things
- **Kicker:** Operates like a mechanised leg
- **Scorpion:** Shaped like the scorpion, it works like a trolley with a light or torch attached to it. Can be used to move around in dark spaces
- **Remote-controlled small car:** Can be used to drive around a space using a remote. It has the same concepts of steering, gear, taking turns as the real one
- **Thrower:** Works like a catapult, where an object is placed in a nook and one press of the remote sends it to another



Robotics camp winner has chance of making it to N



Young minds at work during Reliance World's ROBOCAMP

DNA CORRESPONDENT

Here's a summer camp that few school students would want to miss. The participants will be eligible to enter the National Robotics Competition to be held in at IIT, Bombay where the winner will earn a trip to NASA!

Reliance World, in association with robo.in, a division of Think Labs, has launched ROBOCAMP - a camp that aims to introduce school students of classes IV to XII to the world of robotics.

The first batch of the camp was launched on May 3 at the Reliance World store while the second was held from May 17 to 22.

The third group commenced here on Monday and will continue till the June 4.

"Reliance World has always leveraged technology and has reached out to bring innovative services to almost all parts of the country. With Robocamp, we wish to



Learning is fun for these children engrossed in the camp's fun activities

spark an interest in Robotics among students at an early age, and motivate them to take up the discipline in future," said Sunil Buch, EVP and head of Marketing and Broadband Group at the Reliance Webstore Limited, while talking about

this initiative.

Robocamp aims at giving students in India an opportunity to get themselves introduced to Robotics Technology which is expected to bring about changes in several disciplines like manufacturing, sur-

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