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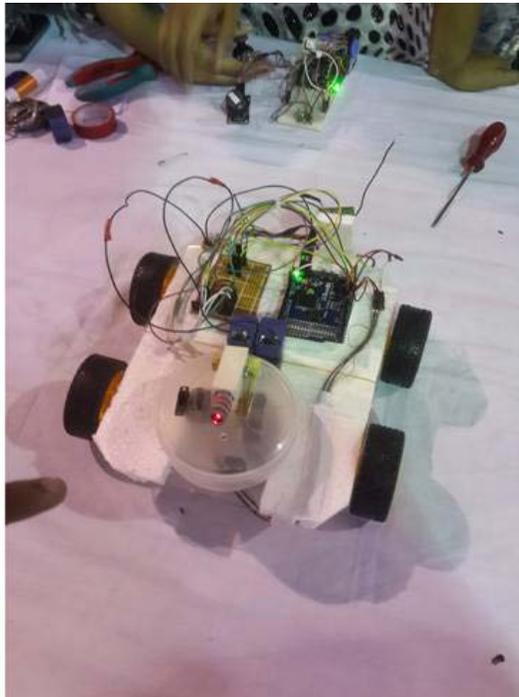
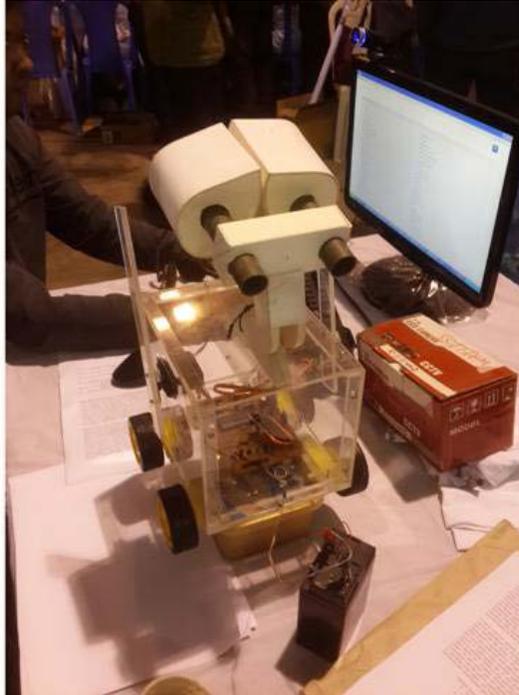
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The real steel

Faisal Mahmud

Faisal Mahmud finds himself in his element at the ultimate geek showdown





Events like National Robotics Festival can easily make a layman feel alienated.

For instance, some lines that were frequently heard amid the increasing cacophony of enthralled tech-savvy youths and the mechanical sounds permeating the bleak auditorium of the National Sports Council (NSC) were:

“Oh, see, they have used Kinect!”

"I think, C# for the back-end would have been a better choice instead of VB."

"No DC motors? How come?"

"Did you think of using hydraulic actuators?"

"We used a gyroscope."

"Debugging in Matlab is tough!"

Esoteric, indeed.

But that didn't detract from the sheer joy of watching those "little things" moving, rotating, jumping, digging and flying.

"You don't need to understand the science of robotics to appreciate a robot. Watching a mechanical object moving on human command is pure fun," said Atiq Abu Rushd, an employee of a buying house, who came to the festival just out of curiosity.

Fahim Morshed, a third-year student of electrical engineering at Brac University, however, came to learn. "I plan to pursue a higher degree in robotics. So I came to see the various projects. And as much fun as robots are to play with, they are even more fun to build," he said, adding, "Besides, my friends from the university have robots here. I came to cheer them on."

His friends Aabdulla Hil Kafi and Maisun Ibn Monowar had designed a robot named Surrogate.

Imagine a health and safety worker assigned to clean an area with hazardous material. What if he could stand in a room and pick up imaginary toxic waste while a humanoid robot mimicked his movements and picked up the real toxic waste?

"That's exactly what our robot Surrogate can do," Kafi said. "We have yet to find a way to achieve complex human motions such as grabbing and complete, smooth arm movement, and we are still working on designing a better humanoid shape for our robot," he added.

While Surrogate can detect human motion, the robot Nirbhik, developed by Nazib Aahmed, SK Nazmul Islam, Md Sarafat Islam and Kashfia Naz Nikita of United International University, can explore solid surface including areas where humans can't reach and detect weapons and metal bodies.

"In 2012 and 2013, the Bangladesh government spent more than Tk1crore to borrow a robot from the US to detect bombs in Ramna before Pohela Boishakh. We wanted to build a robot which could serve the same purpose and cost way less," Nikita said.

The robot Agrobot, developed by Nazifa Rumman, Nowrin Jahan, Maisha Mesbah and Sakila Alam from Military Institute of Science and Technology, could be a very useful tool for an agricultural country like Bangladesh.

"As the name suggests, it's a robot which can do farming," Rumman said.

"We have designed a mechanical grip for the robot. It will get a hold of the crop and then cut the crop with a blade that we've built into it. After that its hand moves backwards and drops the crop into a basket. What's more is that, since the sun shines brightly at the time of reaping in our country, we used a solar panel as our power source. If it is commercially produced, I think it will serve the country well," he said.

Nazrul Islam Khan, secretary at the Ministry of ICT, was present at the festival and agreed with them. "Our young engineers are doing brilliant job. This is an era of science and robots are best example of what science can achieve for us," he said.

Khan also said that the government would soon provide funding for the young entrepreneurs who come up with implementable ideas for industrial robots.

“That’s our main target for organising such a festival: to create a new wave of research on robotics,” said Shams Shad Rafi, the organising secretary of the Engineering Students Association of Bangladesh (ESAB) and, more specifically, the organiser of the festival.

This year, a total of 140 robots created by the students of different universities were displayed. The best two robots will take part in the International Autonomous Robotics Contest (IARC) in IIT, Kanpur.

Investing in (artificial) intelligence

Apart from the varied display of robots, the event constituted three other attractions: Battle of Speed, Robots Got Freedom, and Exploring the Dreams. While the first two events focused on developing robots, the latter one broadened the perspective of school and college going students and propagated their passion for robots.