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Made for the moon

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‘You’ll often see news about drones being made in Bangladesh. But someone needs to commercialise these inventions and market them’



Bangladeshi success stories in the fields of recycling and robotics are rare.

Rare but not non-existent, as a few professors and students at BRAC University have recently shown.

Following a NASA challenge that the students and their mentor took up in 2011, an unlikely combination of recycled goods and robotics has taken Bangladesh all the way to the moon – or as close to the moon as possible for most humans: NASA’s Kennedy Space Centre in Florida.

“In 2011, the NASA Lunabotics Mining Competition [LMC] came up with a project with the agenda that after 2050, no living thing will travel to the moon. That’s when they announced the criteria for a robot that could fulfil this purpose,” says Sabbir Bin Azad, the leader of Chondrobot 3.

But it wasn’t a planned endeavour.

“It was kind of impulsive,” says Khairul Hassan, who is in charge of outreach for the Chondrobot team.

“Shibli Imtiaz, a student, registered for us. Dr Khalilur Rahman, who eventually became our team’s adviser and provided immense support, was a bit hesitant at first,” he said.

“Then following discussions, and upon meeting the requirements, we decided that since we had registered, we should go for it,” he said.

Journey to the moon

And so they were off.

In 2011, when the team went for the first time with Chondrobot 1, they failed to meet all of the criteria including the robot’s weight limit of 80kg.

Shibli had become the leader of the Chondrobot 1 team.

“That was the first time people learned that Bangladesh was making robots at all,” says Sabbir.

The next year, in 2012, the robot named Chondrobot 2 – made in Bangladesh with recycled materials – came 12th in the entire competition and was first among Asian countries.

For a country that does not have a reputation for innovation in robotics, and for a university that does not even have a separate robotics department, this was a huge achievement.

An achievement handmade with things from every corner of the country, from recycled wind shields to plastics.

“After we returned, our work was seen as the first major achievement in the fields of technology and robots. People realised that this was actually happening in Bangladesh,” says Sabbir, who looked after the electronics and hardware section of Chondrobot 3 during the third and last leg of Chondrobot’s journey to NASA.

Upon their return, the group opened the BRAC University Robotics Club and Sabbir proudly says that many students seeking admission to the university cite Chondrobot as their motivation to apply.

Beyond the moon

They say if you shoot for the moon and miss, you will still be among the stars.

Chondrobot still has a long way to go beyond the distance it has travelled so far.

Today, while many of the Chondrobot members have graduated and are working in different fields, Sabbir says they are all still somehow involved with mechanics and robots.

This, along with the new students that join the Robotics Club at BRAC University every year, nurtures hope for a generation of Bangladeshis who can and will take forward robot science in the country – with or without recycled materials.

But challenges remain.

“You’ll often see news about drones being made in Bangladesh. But someone needs to commercialise these inventions and market them,” says Sabbir. “Otherwise, we see that there is a huge cost in making devices, but they are not marketed as products. We need government and private organisations to come forward and commercialise these products so that there is a purpose for these innovations.”

Khairul, who is from a marketing background and got involved with the project simply because he was taking a mandatory computer science class that all students at BRAC University have to take, said: “We’d never been prepared to enter a competition for something run by an entity as prestigious as NASA. We just didn’t know much about the elements needed for that. Our university does not even have a separate department for mechanics.”

Yet, despite these drawbacks, Chondrobot has taken Bangladesh far, reflecting the untapped potential in robotics for an entire generation.

A generation that, when properly nurtured, may be able to take us to the moon and beyond.