

## OFF CAMPUS

# MIST's Mongol Barota secures runners-up trophy at Anatolian Rover Challenge 2024

The team also secured the champion title in the ARC Junior 2024 Exploration Challenge.

FATIMA ASHRAF

Mongol Barota, the Mars rover team from the Military Institute of Science and Technology (MIST), has secured the runners-up trophy at the Anatolian Rover Challenge (ARC) 2024, and the champion title in the ARC Junior 2024 Exploration Challenge. The competition took place from July 17 to 21 at the Middle East Technical University (METU) in Ankara, Turkiye.

MIST's Mongol Barota, consisting of 38 students across several engineering departments of MIST, took on this year's ARC challenge with their latest rover, Maverick. Six of them represented the team in Turkiye.

The team was led by Md Jawadur Rahman from the Department of Computer Science & Engineering (CSE), with Alamin Rashid Tarek from the Department of Mechanical Engineering (ME) as the co-leader. Other members of the team included Lt Md Sarower Morshed (CSE), Istiaque Ahmed Arik (CSE), Raisul Islam Rahad (CSE), and Ahmed Ahnaf Saqafi (ME). The team was guided by their faculty advisors Lt Col Muhammad Nazrul Islam (CSE), Maj Md Shawkat Ali (CSE), and Lecturer Shah Md Ahasan Siddique (ME). The ARC Junior 2024 team was led by Lecturer Ahasan with Alamin and Saqafi.

Mongol Barota faced fierce competition from 21 other teams from countries like Poland, India, and Turkiye amongst others. The competition required teams

to complete four demanding missions set in environments simulating the environmental conditions in Mars, the moon, and the Earth.

Despite few technical challenges, the team's resilience paid off, earning them the second overall position with a total score of 235.18 points. They also received the ARC Special Prize for the "Best Team Structure". This award was judged by Umut Yildiz, a deep space communications engineer at NASA to whom Mongol Barota's inclusive team culture, which involves welcoming all members regardless of age or contribution, and nurturing a healthy learning and growth environment, stood out.

On July 18, during the Night Launch mission, the team received a devastating news from Bangladesh that Shykh Ashabul Yamin, a fourth-year CSE student from MIST, had tragically lost his life during the quota reform protests. The news shook the team to its core. Rahad, the rover's communications lead, said, "We felt extremely restless for not being able to communicate back home due to the nationwide internet shut down in Bangladesh back then. Despite wanting to give up, we stayed and fought back with our feelings, because we knew we had to win this for Yamin *bhaiya*, as well as for all the others who have embraced martyrdom [during the protests]."

*Fatima Ashraf is a Campus Ambassador for The Daily Star from Military Institute of Science & Technology (MIST).*



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## OFF CAMPUS

# NABIK: A REMOTE-CONTROLLED ROBOT DEVELOPED BY BRACU STUDENTS FOR FLOOD RELIEF

RITTIQUE BASAK

Members of BRAC University's Robotics Club, in collaboration with the startup Nabik Automations, have developed the "Nabik" robot to help with relief operations across different parts of the country affected by the recent floods.

Nabik Automations was formed in 2022 by Fardeen Khan and Mashruzzaman Saad, current students of BRAC University (BRACU), under the guidance of Adil Hossain, a BRACU alumnus currently pursuing his post-graduate studies at Toronto Metropolitan University, Canada. Alongside Fardeen, Mashruzzaman, and Adil, the current team also consists of other members, including Md Saqlain Newaz Chowdhury, Fariyan Shah Fahi, Bhuvan Mazumder, Miftahul Jannat, Abu Auhon Rahman, Muntasir Abdullah Bin Ahmed, and Nafisa Rahman.

Nabik is a compact, two-foot-long robot boat that can operate effectively in the shallow and narrow channels common in flood-hit areas. The robot is remote-controlled, with an impressive operational range of two kilometres, allowing it to navigate through flood-affected areas that are otherwise difficult to access. Despite its small size, Nabik is capable of carrying substantial payloads, enough to deliver up to eight life jackets and several packaged meals in a single trip. This capacity makes it an invaluable tool in initial response efforts, where rapid delivery of life-saving equipment and food can make all the difference.

Moreover, Nabik can also record live video footage from the centre of the disaster zone using a first-person perspective (FPV) camera, providing rescuers with an uninterrupted feed of the ground situation. By providing a direct visual link to the affected areas, the FPV camera helps the team make informed decisions about where to direct their efforts, ensuring that aid reaches those who need it most. It also has a microphone for communication, allowing the rescue team to talk directly with those in the affected areas. The ability to communicate in real-time can make a significant difference in emergencies, helping to calm fears and facilitate organised, effective rescue operations.

Recently, Nabik successfully managed to deliver relief goods like sanitary napkins, water purifying tablets, etc. to families stuck in flood-hit areas in Feni. Innovative solutions like Nabik will be essential in saving lives and assisting communities as climate change continues to increase the severity and frequency of natural disasters.

*Rittique Basak is a Campus Ambassador for The Daily Star from BRAC University.*