

# THE YOUTH IN THE ERA OF DIGITALISATION

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## Six indomitable women: Success stories in STEM

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and acquired multidisciplinary training. This included studying dialysis in mice, whereby she injected dialysis fluids into mice abdomen and later visualised their tissues histologically under the microscope to detect physical changes. For another project, she isolated bacterial mutants that showed altered response to antibiotic treatment.

As an undergraduate student, she worked as a research intern under scientist Dr Mohammed Ziaur Rahman's supervision at the Virology Laboratory of the Programme for HIV and AIDS, under International Centre for Diarrheal Disease Research, Bangladesh (icddr,b). During that time, Ananya became familiar with viral genomic studies and collected data on the genotypes of respiratory syncytial virus circulating in Dhaka.

"Dr Ziaur was quite content with my lab performance and encouraged me for higher studies," she says. When she returned to Bangladesh from Manchester, Ananya joined icddr,b, where she currently works as a senior research assistant. She is a member of



Tara Sobhan

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the molecular team at their Virology Laboratory, where her daily workload includes detecting the presence of viral pathogens in patient samples by extracting, amplifying, quantifying,

and analysing certain marker genes. "The viruses targeted are influenza virus, norovirus, Nipah virus, and other agents of febrile illnesses. At the same time, I guide the research interns in the laboratory with their experiments and thesis writing. I am also involved in scientific manuscript writing with my supervisor," Ananya adds.

Although she has personally not faced any issues in the workplace so far, Ananya notes that some factory-based scientific jobs are only available to men, as women may find the working conditions and commute difficult and unsafe. "Women in field work positions may also face social

or physical obstacles, depending on the nature of the jobs. Staying after hours may be required for emergency tests, but women are rarely obliged," she asserts. "Other than that, gender or political biases may exist, but that varies between organisations."

She also spoke about the current opportunities for women in science-focused jobs in Bangladesh. "Women are thriving in the research and development, quality control, diagnostics, and science education sectors. The need for jobs will increase once more young girls enroll in science-related programmes," she says. "These changes will happen when

families are more aware and supportive of such career paths for their girls." Ananya herself plans to enroll in a UK-based PhD programme soon. "I aim to be an example to young girls who are interested in science," she concludes.

Today, advanced robotics continues to surprise those of us who couldn't have fathomed the existence of AI bots like Sofia, Siri, Alexa, and Google Assistant. But thanks to tech giants like Amazon, Microsoft, Apple and others that continue to set the pace, this sector is something to marvel at. Robotics is gaining momentum in many schools worldwide. While it's important to note that teachers who administer

courses in this area should have advanced knowledge in programming and other skills, students are reaping huge benefits, not just for the present, but also for the foreseeable future.

The Tech Academy, founded by Shams Jaber in 2013, is an institute in Banani where children can learn how to create robots, software, and even CGI animations. Students of the academy are also given the opportunity to create actual products for different companies, and for competitions as well. Kids from the academy also teach adults all they know about technology at events organised in Jatra Biroti every Friday.

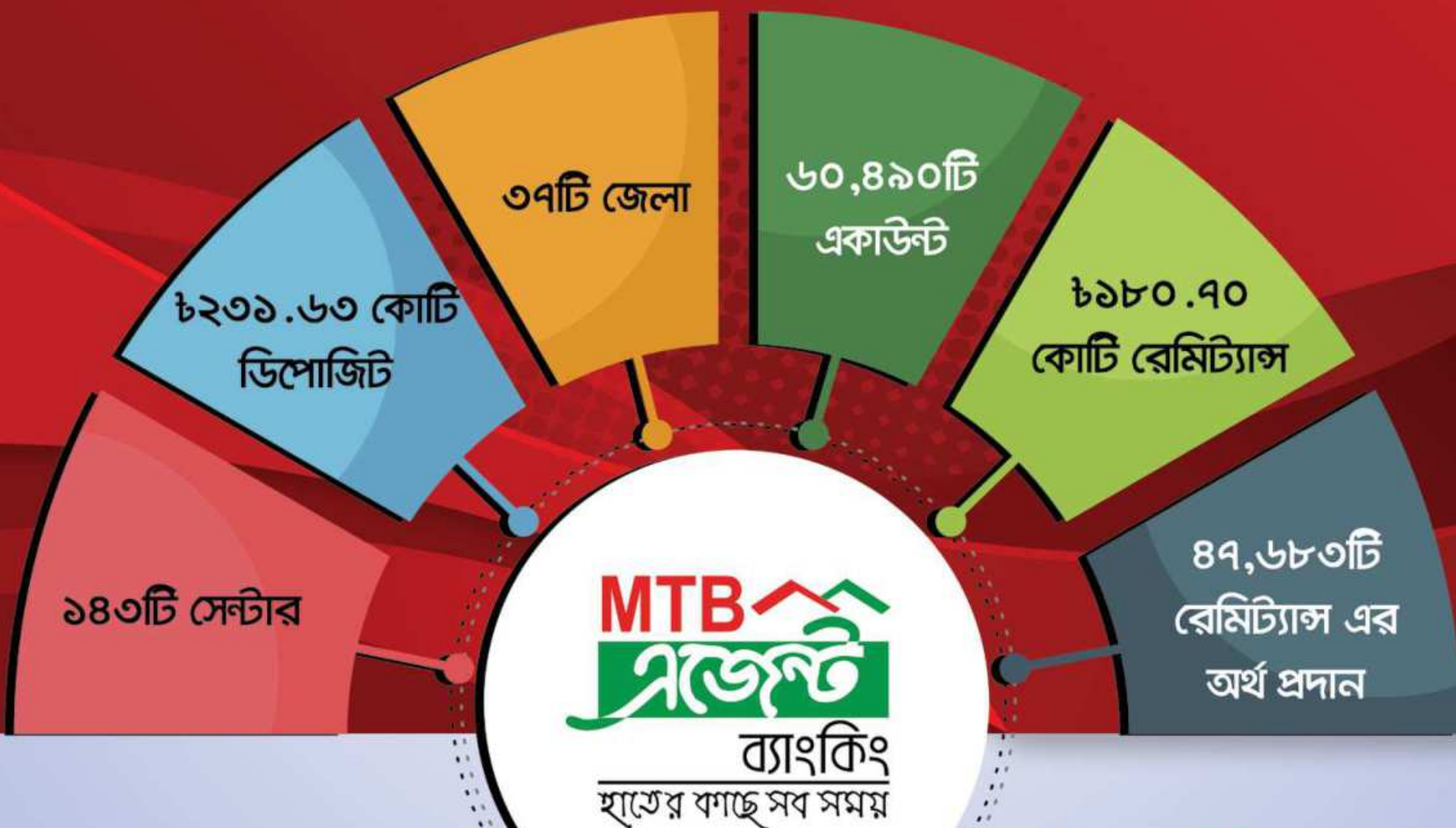
Eleven-year-old Tara Sobhan, a seventh grader at Grace International School, is one of the youngest and most promising students at The Tech Academy. A go-getter by nature, Tara does not let her age get in her way of learning new things. She has been learning robotics and animation at The Tech Academy for over two years. From working on LEDs, RGBs, Sonar, LDR to RC Car, Servo and Dot Matrix, Tara has been involved in a variety of class projects in robotics. In the animation classes, she learns building models, texturing, camera animation, soccer animation, and colouring materials in 3D, among other things.

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Tara's story showcases that when girls realise their ability to code and build robots, they can be empowered to have successful futures and create innovative technology.

Photos: Sheikh Mehedi Morshed, Shanto Laurence Costa and Avipsu Das Gupta

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