



From Dreams to Space:

Bangladesh's Journey of Building a Space Ecosystem Through Education, Inspiration, and Opportunity



A case study from Bangladesh by:

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Sara Karim

- Bangladesh's *1st student to graduate in Space System Engineering* (M.Sc)
- Mission Expert - Space Exploration Olympiad
- Instructor - Dept. of Computer Science, Asian University for Women, (Bangladesh)
- International Navigator - NASA International Space App Challenge 2025, 2026
- Judge - Conrad Challenge, Space Centre Houston, 2025
- Instructor - Dept of AI and Coding, Space Innovation Camp
- Astronaut Candidate Training - TSI





Where did we actually start?



No space agency

No dedicated national space agency, limited infrastructure, and few visible pathways in space.



No academic courses and no teaching about space

Space was not part of the school curriculum, and there were very few opportunities to learn about space.



Space seen as a distant dream

For many, space was just a fancy word — inspiring, but often felt out of reach.



But there was curiosity

Despite the challenges, there was a generation of young people who were curious, eager to learn, and ready to dream.

This was our starting point — a blank space to be filled with vision, people, and possibilities.



THE FIRST STEP: START WITH CURIOSITY

SPACE INNOVATION CAMP BANGLADESH



We started by creating opportunities
for young students to learn about space.



We built a community so nobody could ask
**“Why can’t I be
a part of Space?”**





5,000+

people in our community

Students, educators, mentors
and space enthusiasts across
Bangladesh.

Ultimate goal was to give young people a place to explore, build, compete, and belong.

Students were given ways to actually **do something**.



LEARN

Space science •
Astronomy • Exploration



BUILD

Hands-on projects •
Model satellites •
Experiments



COMPETE

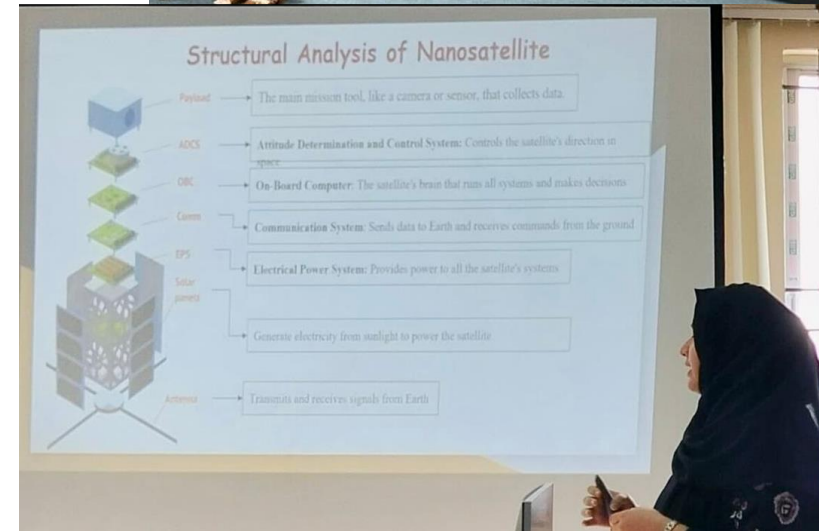
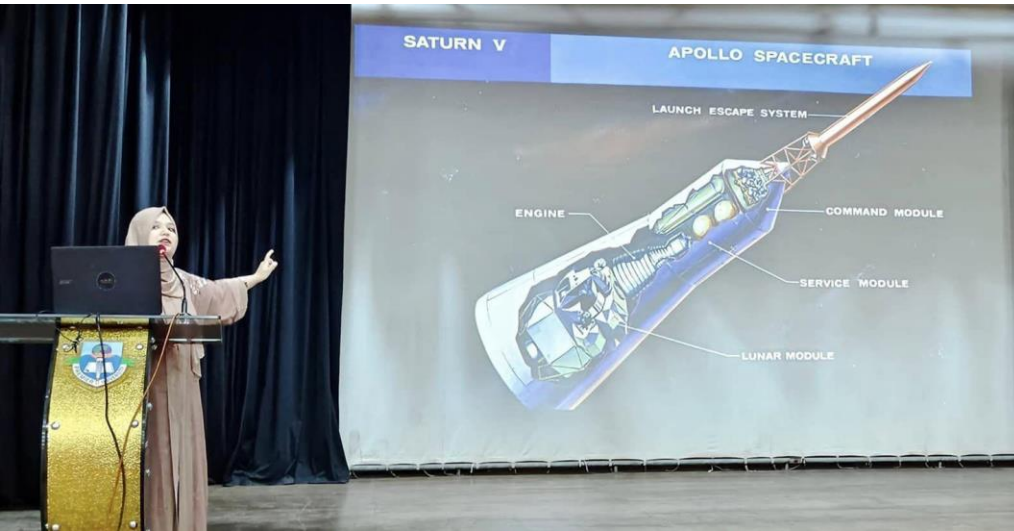
Olympiads •
Challenges •
Space competitions



CONNECT

Mentors • Communities •
International opportunities

Space Education & Outreach



SKILLS

- Hands-on projects
- STEM
- Satellite activities



EXPOSURE

- Competitions
- Mentoring
- International programs



PATHWAYS

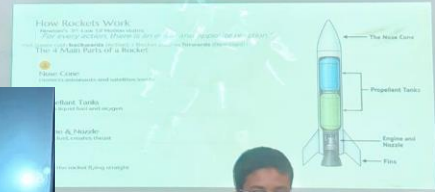
- Higher education
- Research
- Global collaboration



★ Guided by me as **Mission Expert and lead author**, **Our Space Crew (ages 9 - 16)** explored a concept for using Martian atmospheric resources to support future human missions, developing **PlasmaQore**, a hybrid quantum-plasma framework for sustainable **CH₄ and O₂** production through hydrogenation.

- The research work was accepted at **IEEE SMC-IT/SCC 2026**, held at the **California Science Center, Los Angeles, USA**

GAVE THEM A VOICE!!



We wanted them to believe that their ideas were worth being heard...!

CHALLENGES WE FACED

Building a space ecosystem in Bangladesh meant starting from almost zero.

Limited Government Priority

Space was not a national priority, with minimal institutional support.

Lack of Policy and Legal Framework

No dedicated space policy, regulatory body, or clear guidelines for space activities.

No National Space Agency

Absence of a formal space agency and structured pathways for students and researchers.

Financial Constraints

Very limited funding, infrastructure and access to advanced facilities.

Limited Role of Universities

Space-related education, research and hands-on opportunities were scarce in academic institutions.

Geographical and Global Access Barriers

Distance, cost and limited access to international networks, mentors and collaborations.

Lack of Awareness and Exposure

Space was often seen as a distant dream, with limited public understanding, especially among young people.

Gender and Social Barriers

Fewer opportunities and visible role models for girls and women in space and STEM.

Inadequate Space Sector Players

Very few organizations, professionals and industry involvement in the space sector.

Geopolitical Considerations

Reliance on international opportunities and the need to navigate global geopolitical dynamics.

Despite these challenges, we kept going — because we believed in the potential of our people.

Our Plans for the Future

With collaboration, guidance and shared opportunities, we aim to build a stronger and more inclusive space ecosystem in Bangladesh.

- 01 • International Collaboration**
Build stronger partnerships with global space organizations, universities and research groups for knowledge exchange, training and joint projects.
- 02 • Research and Innovation**
Work on relevant research in space systems, satellite applications, planetary exploration, and AI for space missions.
- 03 • Advocacy and Policy Support**
Raise awareness and engage with policymakers to support the development of a formal space roadmap and ecosystem in Bangladesh.
- 04 • Industry and Real-World Opportunities**
Connect students with industry, startups and international programs to create practical pathways into space-related careers.

We would love
**your support
and suggestions.**

Your guidance, collaboration and suggestions can help us create more opportunities, empower the next generation, and build a brighter future for Bangladesh in space.

What We Have Learned as an Emerging Space Nation

01

People and Education Create Momentum

A curious and motivated young generation can drive real progress when given opportunities and guidance.

02

Access to Global Knowledge Matters

International exposure, mentors and open knowledge help us learn faster and avoid repeating mistakes.

03

Collaboration Multiplies Possibilities

Working with international partners, universities and industry gives us access to resources, expertise and real opportunities.

04

Hands-On Experience Builds Capability

Practical projects, competitions and training turn interest into skills and confidence.

05

A Clear Vision and Supportive Conditions are Key

Long-term commitment, enabling policies and sustained investment are essential to build a healthy and inclusive space ecosystem.



THIS YEAR'S THEME

The World Needs **More Space**

And we are aiming towards it.



MORE
KNOWLEDGE



MORE
OPPORTUNITIES



A STRONGER
FUTURE



From Dreams to Possibility

Bangladesh may still be at the beginning of its space journey,
but the dream is already alive.

Through education, mentorship, collaboration and opportunity,
we are working to turn that dream into a pathway for the next
generation.

*“Because before we build spacecraft,
we must build the people who will build them.”*

Thank you — let's connect.

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