



# Hemal Ishak

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## OBJECTIVE

My vision is to be one of the best Aerospace engineers in the aviation industry. My ambition is to make aviation sector more affordable for mass people as a transportation medium. I am so passionate and determined about my career, and committed to exploring new horizons and fostering global connectivity through innovative engineering solutions. My dream is to explore the world beyond borders, spreading my wings like a bird.

## EDUCATION

**BSC in Aeronautical Engineering (Aerospace):** completed 5 semesters out of 8 with a CGPA 3.76

January 2022 - present

*Bangabandhu Sheikh Mujibur Rahman Aviation and Aerospace University (BSMRAAU), Lalmonirhat, Bangladesh*

**Higher secondary (science):** Passed in 2020 with GPA 5.00

*Bangladesh Navy College, Dhaka, Bangladesh*

**Secondary School (science):** Passed in 2018 with GPA 5.00

*Charfasson T. Barret Model Secondary School, Bhola, Barisal, Bangladesh*

## EMPLOYMENT HISTORY

**Physics instructor and co-founder of an online-based offline learning platform,**  
Jun 2022 – June 2024

**U-Turn Academy, Bhola, Bangladesh**

- Contributed to the platform's conceptualization, mission, and operational execution.
- Played a pivotal role in marketing and outreach efforts to attract both students and instructors.
- Engaged in strategic decision-making to ensure the platform's growth and success.
- Developed and delivered engaging Physics lessons for Intermediate students

- Created effective teaching materials (presentations, practice sheet) to optimize learning outcomes, evaluated their progress, and providing constructive feedback to enhance understanding.

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**Associate Secretary (Publication), Aug 2023- Current**

**BSMRAAU Aero-Astro Club (BAAC), Lalmonirhat, Bangladesh**

- Wrote and edited articles, newsletters, and managed the publication process for the club.

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**Child Journalist, Feb 2017 - Aug 2020**

**bdnews24.com, Dhaka, Bangladesh**

- Produced engaging articles (features, interviews, news) on diverse topics (e.g., Olympics, social issues, environment, travelling).
- Developed time management and organizational abilities by meeting deadlines while balancing writing responsibilities with other commitments.
- Demonstrated adaptability and initiative through participation in workshops by UNICEF and Shilpakala Academy, showcasing a commitment to learning and collaboration.

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**PROJECT  
EXPERIENCE**

**Flight Engineer, Voice operated smart autopilot drone**

Dec 2023- June 2024

- Made a drone with the other 4 members, which has some specifications such as autopilot, voice command maneuvering, obstacle avoidance, and crops quality analysis through image processing of the captured aerial footages.

**Team leader, Celestial Voyages**

Aug 2023 - Oct 2023

- Led a team of five developers, designers, and researchers to create a tool that will not only develop customized itineraries for future space travelers but also educate present-day users about the solar system.
- Utilized NASA, and other open-source platforms data to create the contents
- Developed the project road map, collaborated with members, and eventually secured the 1st runner-up position in the Bangladesh round of the NASA Space App Challenge.

**Junior Team leader (Ground Station), PicoSat4Bangladesh**

Mar 2022 - Jun 2023

- Supervised a team of 7 members in the implementation and development of an active ground station for our PicoSat4Bangladesh satellite.
- Troubleshooted technical challenges and ensured the smooth operation of the ground station.
- Successfully captured signals from the NOAA satellite, demonstrating the functionality and capabilities of the ground station.

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**PUBLICATIONS**

- **Employment for Aeronautical Engineers at Home and Abroad: Where the Dreams Take Flight**

([https://drive.google.com/file/d/1HP6RzajNZjs1zuHfl61BWdvq2TMZ6Q1N/view?usp=drive\\_link](https://drive.google.com/file/d/1HP6RzajNZjs1zuHfl61BWdvq2TMZ6Q1N/view?usp=drive_link))

- **অলিম্পিয়াডের মাধ্যমে উৎসবের আমেজ ছড়াই (Spread the mood of the festival through the Olympics)** (bdnews24.com, September 18, 2019)  
([https://hello.bdnews24.com/onyachokhe/article16837.bdnews?fbclid=IwAR0a5hczO\\_FALJfa2fXgFw2oA0wkbiK2sUKChfZXz\\_CQ5BxZ4npXt-Mbq7I](https://hello.bdnews24.com/onyachokhe/article16837.bdnews?fbclid=IwAR0a5hczO_FALJfa2fXgFw2oA0wkbiK2sUKChfZXz_CQ5BxZ4npXt-Mbq7I))
- **ভালো নেই পথশিশুরা (Street Children in Crisis: Their Tough Journey)** (bdnews24.com, June 25, 2018)  
([https://hello.bdnews24.com/onyachokhe/article16218.bdnews?fbclid=IwAR07r5z\\_Wf8tXvec0vDZcJnuQwVENQwcYx7v74-fiuyQh9c94\\_snVZyGwoY](https://hello.bdnews24.com/onyachokhe/article16218.bdnews?fbclid=IwAR07r5z_Wf8tXvec0vDZcJnuQwVENQwcYx7v74-fiuyQh9c94_snVZyGwoY))
- **ট্রাফিক জ্যাম কিন্তু বিরক্তিকর না! (Traffic Jams: Not Annoying, But an Opportunity for Growth!)** (bdnews24.com, 4 June, 2018)  
(<https://hello.bdnews24.com/onyachokhe/article16010.bdnews>)
- **দি আর্ট অফ ওয়ার (The Art of War)** (bdnews24.com, 29 April, 2018)  
([https://hello.bdnews24.com/onyachokhe/article15729.bdnews?fbclid=IwAR0At\\_JWOHpkSLxIkf1TYRGUic1wGmg-StT7CvtmRPud08zP7JZ3COy8dCY](https://hello.bdnews24.com/onyachokhe/article15729.bdnews?fbclid=IwAR0At_JWOHpkSLxIkf1TYRGUic1wGmg-StT7CvtmRPud08zP7JZ3COy8dCY))
- **সে এক রূপকথার শহর (Where the City Meets Fairytale Magic)** (bdnews24.com, 15 April, 2018)  
(<https://hello.bdnews24.com/amarkotha/article15641.bdnews?fbclid=IwAR2tvsvdm6ASvHY9sWTRxTPcVifYULCJLQQjdPPnLhZPcDOj47zCgndGsvw>)

## HONOUR AND AWARDS

- BSMRAAU Scholarship, December 2023
- Vice Chancellor Scholarship, June 2024

## CERTIFICATIONS AND LICENSES

- “Foundation of Cybersecurity” course certification, Nov 2023, Google
- NASA Space App Challenge 1st runner-up (Bangladesh round), Oct 2023, NASA
- “An Introduction to Human Rights” course certification, Aug 2023, Amnesty International
- MATLAB self-paced training course, July 2023, MathWorks
- Best Abstract (Satellite and Aerospace), Jun 2022, IEEE Bangladesh Section
- “Introduction to digital Journalism” course certification, July 2021, Reuters

## SKILLS AND ACHIEVEMENTS

- Demonstrated leadership with notable results in team projects and initiatives
- Proficient in C and C++ programming languages
- Proficient in XFLR5 software for aerodynamic analysis
- Expertise in MATLAB for numerical and data analysis
- Experienced in aerodynamic analysis using XFLR5 software
- Proficient in mechanical design using SolidWorks
- Strong skills in physics teaching, presentation, and public speaking
- Advanced proficiency in Microsoft Office (Word, Excel, PowerPoint)
- Skilled in creative writing
- Capable of basic video editing
- Excellent communication skills

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## HOBBIES AND INTERESTS

- Travelling
- Listening music
- Passionate about engaging in project work
- Enthusiastic about watching documentaries on nature, history and aviation.

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## REFERENCES

1. **Dr. Saiaf Bin Rayhan**, Asst. Prof. of BSMRAAU  
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Contact No: +8801755349337
2. **Group Captain Dr. Saifur Rahman Bakaul**, CoD Aerospace, BSMRAAU  
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