

# Mahadir Islam



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## Education

### Higher Secondary School Certificate

Birshrestha Munshi Abdur Rouf Public College

2023 – present

### Secondary School Certificate

Ashuganj Tap Bidyut Kendra High School

2016 – 2022

Clubs: Information and Technology Club, Aphelion  
Science Club, Science Club, Robotics Club, ICT club,  
International MUN

Courses: Robotics Basic to Advance, iDEA basics 101  
of Innovation Design & Entrepreneurship, Data  
Analysis with R Programming, Advanced C, C++,  
Python, JavaScript, Fundamental of Mechanical  
Engineering

## Professional Experience

### Founder & CEO

*Dreams of Bangladesh Robotics Company (A global leader in robotics, empowering youth and transforming education through innovation and inclusivity)*

Aug 2021 – present

- Designed and launched 100+ flagship products, including Agricultural V3 Robot, HydroJan, and Bengali AI Home Automation.
- Sponsored and organized international events, establishing platforms for innovation and global collaboration.
- Trained 10,000+ students via 30+ workshops and internship programs across 65 institutions, offering free opportunities for underprivileged learners.
- Positioned DoB as Bangladesh's leading robotics company, driving technological advancement and youth empowerment.

### Founder & Leader

*Dreams of Bangladesh Robotics Team (Bangladesh's premier robotics team driving innovation, collaboration, and excellence)*

Feb 2019 – present

- Achieved 50+ champion titles, including 15+ gold medals, and multiple Best Team, Best Project, and Best Club awards.
- Led 100+ core members, collaborating with 40 institutions and developing 150+ groundbreaking robotic solutions.
- Offered 15+ research opportunities, fostering innovation through partnerships with 12 organizations and government sectors.
- Recognized globally with 4 international and 6 national awards for robotics and technological innovation.

### Founder & Co Leader

*Bangladesh Moon Lander Rover Team (Bangladesh's first independent NASA Rover finalist team, pioneering lunar exploration technology)*

Aug 2024 – present

- Founded and co-led Bangladesh's first independent NASA Human Exploration Rover Challenge finalist team.
- Raised \$30K+ in funding and sponsorships to support the development of the country's first remote-controlled moon rover.
- Trained 20 exceptional members selected from 700+ applicants, fostering top-tier engineering and design skills.
- Developed Bangladesh's first-ever remote-controlled moon rover, integrating advanced mechanisms for lunar exploration.

### Founder & Leader

*DoB HydroJan (Autonomous Underwater Vehicle Team)*

Jun 2024 – present

- Pioneered Bangladesh's first wireless autonomous underwater vehicle (AUV).
- Directed AI & ML integration for innovative aquatic research solutions.
- Secured \$10K+ funding and collaborated with 2 organizations to enhance capabilities.
- Provided free underwater technology services to address environmental challenges.

## Senior Research Scientist

*Robo Tech Valley (Driving innovation at Bangladesh's leading robotics R&D center through impactful research and mentorship)*

- Published 6 research papers in peer-reviewed journals (IEEE, MDPI); leading 5 projects on humanoid robots and assistive tech for the visually impaired.
- Designed 35+ advanced robot prototypes and enhanced AI algorithms for real-world applications.
- Mentored 200+ junior team members and interns, fostering technical expertise and collaboration.
- Managed 20+ research projects, collaborating with 100+ engineers, 20+ designers, and 15+ developers to bridge research and practical implementation.

## Country Representative

*Country Representative, Indonesian Young Scientist Association (IYSA) & Malaysia Innovation Invention Creativity Association (MIICA)*

- Representing Bangladesh in global STEM and innovation platforms.
- Coordinated 650 teams for the 1st International World Invention Competition and Exhibition National Round 2025.
- Secured \$80K in sponsorships to support events and participants.
- Organized 6 divisional events, engaging 20,000+ students across Bangladesh.
- Fostered partnerships with 19 nations to promote STEM education and global collaboration.

Aug 2024 – present

## Managing Director

*Wafi Hardware and Tools (Leading Bangladesh's trusted hub for innovative hardware and tools solutions)*

- Scaled monthly revenue to 5M BDT and annual revenue to 90M BDT (2024) through strategic diversification and market expansion.
- Transitioned from imported products to developing high-quality, 100% Made-in-Bangladesh tools, boosting local manufacturing and reducing costs.

May 2016 – present

## Founder & Advisor

*ATBKHS Robotics Club*

- Empowering the next generation of innovators through mentorship, leadership, and community-driven initiatives.
- Founded the school's first robotics team and area's first robotics club, mentoring 200+ students to achieve international recognition and national championship titles with a 90% success rate in 300+ competitions.
- Organized 10+ science festivals and 20+ seminars on robotics, AI, and ML, inspiring technological curiosity and innovation.
- Secured \$10K+ sponsorships, providing resources and opportunities to advance students' participation in STEM initiatives.

Aug 2020 – present

## Embedded Systems Intern

*Robo Tech Valley*

- Optimizing robotic systems through advanced embedded solutions.
- Developed and tested embedded systems for robotic controllers using C++ and Python on Arduino and Raspberry Pi, improving system efficiency by 20%.
- Optimized power consumption with dynamic algorithms, extending battery life by 15% for mobile robotics.
- Integrated IoT devices using MQTT protocols, enabling remote diagnostics and enhancing functionality for AI applications.

Mar 2022 – Apr 2023

## Robotics & Automation Intern

*Ashuganj Power Station Company Limited*

- Developed and programmed robotic systems using **Python, PLCs, Raspberry Pi, and IoT sensors**, enhancing plant maintenance efficiency by 25% and reducing downtime with automated workflows.
- Integrated **AI-driven robotics** and predictive maintenance systems, streamlining repetitive tasks, improving safety, and reducing human error by 20%.

Jul 2023 – Dec 2023

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## Research and Publication

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### 1. Co-Author: IoT-based Autonomous Robot for Smart Farming

*Fifth International Conference on Emerging Trends in Electrical, Electronic and Communications Engineering(ELECOM 2024)*

### 2. Co-Author: IoT-Based Smart Remote Door Lock and Monitoring system using an Android Application

*MDPI, 1st International Conference on Industrial, Manufacturing, and process Engineering (ICIMP-2024)*

### 3. Co-Author: Design and Simulation of a Quadruped Robot

*International Conference on Data Processing and networking(ICDPN-2024)*

### 4. Co-Author: Precision Fish Farming to mitigate Pond water Quality Through IoT

*IEEE, 3rd International Conference on Computing and Machine Intelligence,2024*

### 5. Co-Author: A Raspberry Pi Driven Autonomous humanoid Robot for Advanced Application

*12th International Conference on Control,Mechatronics and Automation (ICCMA 2024)*

### 6. Co Author: Internet of Things and Artificial Intelligence Powered Crop Suitability Detection System for Sustainable Farming

*10th International Congress on Information and Communication Technology, 2025*

### 7. Co-Author: Efficient Route Planning and Navigation in Drones Using Pixhawk Autopilot

*6th International Conference on Artificial Intelligence, Robotics, and Control (AIRC 2025)*

### 8. Co-Author: Automated Recycling of Plastic Waste into 3D Printing Filament: A Sustainable Approach

*1st International Conference of International Association of Technology and Management (IATM 2025)*

### 9. Co-Author: Affordable Bionic Hands with Intuitive Control Through Forearm Muscle Signals

*The IEEE 4th International Conference on Computing and Machine Intelligence (ICMI 2025)*

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## Skills

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### Programming Languages

Python, Java, C++, JavaScript, HTML, CSS, Go, Rust

### Robotics Development

- ROS (Robot Operating System), VEX Robotics, Robot Kinematics & Dynamics, Control Algorithms

### Advanced Manufacturing

Additive Manufacturing (3D Printing, SLM), CNC Machining, Milling, Lathe Programming, Laser Cutting & Etching, Process Control & Automation in Manufacturing, Materials Science & Engineering for Manufacturing

### AI & Machine Learning Tools

- TensorFlow, Keras, PyTorch, Scikit-learn

### Embedded Systems & IoT

Arduino, Raspberry Pi, ESP32, MQTT, Zigbee, Bluetooth, LoRaWAN, IoT Cloud Platforms (AWS IoT, Azure IoT Hub, Google Cloud IoT)

### Computer Vision & Image Processing

OpenCV, TensorFlow Object Detection, YOLO (You Only Look Once), DLIB, Image Augmentation, Histogram Equalization, Image Segmentation, Face Recognition, Motion Detection

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## Projects

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### Signature:

- **Covid Prevention System** – Scalable and innovative public health solution.
- **Agriculture Robot V3 (Version 1 to 7, Prototype to Field-Level)** – Advanced and adaptable agricultural automation tool.
- **360° Automatic Radar for Defence** – High-precision and efficient threat detection system.
- **Aquatic Friendly Robot** – Sustainable and eco-conscious underwater robotics solution.
- **AI-Controlled Aerial Hexasky 6X (Black Eagle)** – Cutting-edge AI-integrated aerial technology.
- **NASA's Moon Rover (Mirage 1.0)** – Trailblazing lunar exploration rover system.
- **Mars Rover (Bijoy Rover 1.0)** – Pioneering interplanetary robotic exploration system.
- **Multipurpose Hexacopter Drone for Rescuing System** – Versatile and high-performance disaster response drone.
- **Unmanned Fire Fighter Robot** – Autonomous and life-saving fire suppression robot.
- **Road Cleaning Robot (InteliSweep)** – Efficient and eco-friendly road maintenance robot.
- **Road Repairing Robot (RoadMaster Pro)** – Innovative and high-efficiency infrastructure repair robot.
- **Pond Water Quality System through IoT for Precision Fish Farming** – Intelligent and sustainable aquaculture innovation.
- **New Generation Quadruped Robot (Design and Real-Life Simulation of a Quadruped Robot)** – Dynamic and highly adaptable robotic platform.
- **Autonomous Underwater Vehicle (HydroJan)** – Bangladesh's first wireless and intelligent aquatic research system.

- **BlazeWing (High-Speed Racing Drone)** – Aerodynamically optimized high-performance drone.
- **AI-Powered Personalized Healthcare Assistant (CareBuddy)** – Intelligent and accessible health management solution.
- **Automatic Flood Robot (JibonSavior)** – Innovative and life-saving flood response robot.

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## Achievements

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- **Best Researcher Award, ICIMP, University Of Regina, Canada, 2024**
- **Gold Medalist, 5th World Invention Competition and Exhibition-2023**
- **Gold Medalist, 6th World Invention Competition and Exhibition-2024**
- **Country Representative Award of Indonesian Young Scientist Association, 2024**
- **Finalist, 31st Nasa Human Exploration Rover Challenge, USA, 2024**
- **Champion, 4th International Robo Tech Olympiad, 2024**
- **SDGS Inspiring Leaders and Awards, Youth SDGS Summit, South Korea, 2024**
- **Champion, TVE International Skill Innovation Fest, IUT, 2024**
- **Best Project Award, World Invention Competition and Exhibition, Malaysia, 2023**
- **Special Club Award, Bach Khoa Math and Science Club, Indonesia, 2023**
- **5th place (Top 5), Innovation Challenge, World Robotics Championship, India, 2022**
- **4th place (Top 5), Robo Soccer Segment, World Robotics Championship, India, 2022**
- **4th place (Top 5), Robo Race Segment, World Robotics Championship, India, 2022**
- **Technical Medalist, Codeavour International Dubai, 2024**
- **Runner Up, Creative Talent Hunt Competition, Final Round, 2022**
- **Champion, 41th National Science and Technology Week, 2022**
- **Champion, 43th National Science and Technology Week, 2024**
- **Champion, Notre Dame Annual Science Festival 2021 & 31st GKC**
- **Champion, Notre Dame Annual Science Festival 2023 & 33rd GKC**
- **Champion, Creative Talent Hunt, Divisional Round, 2022**
- **Champion, Creative Talent Hunt, District Round, 2022**
- **6th position, Biology Olympiad, Divisional Round, 2021**
- **4th Place, Robo Racing, BUET Autofest 2024**
- **Finalist-Senior category, ICT olympiad Bangladesh 2023**
- **Champion, Project Showcasing, ASSAD and BFF Science Festival-2021**
- **Champion, 07th March Story Writing, Dhaka University, 2022**

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## Interest

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Leadership and Personal Growth, Tech Startups and Innovation Ecosystems, Robotics, Software Development & Artificial Intelligence (AI), Machine Learning (ML), Internet of Things (IoT), Programming, CyberSecurity & Ethical Hacking, Drone Technology, Youth Empowerment, 3D Printing and Prototyping, International Collaboration and Partnerships, Sustainable Technology, Guitar, Bass, Drum playing, Playing Cricket, Football