ABDULLAH AL JUNAED

TECH & MANAGEMENT SPECIALIST | ROBOTICS & 3D DESIGN INNOVATOR

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Innovative technologist and community leader passionate about robotics, 3D design, and social impact. Served as one of the youngest government consultants in Bangladesh, leading digital fabrication initiatives. Founder and technology leader across multiple startups, award-winning STEM competitor, and active Rotaract president recognized for national and international service. Dedicated to designing accessible, sustainable, and scalable technological solutions that bridge education, innovation, and impact.

AREA OF EXPERTISE

Technical: 3D Design (Fusion 360, Blender), Robotics, IoT Systems, Arduino, ESP32, Python, C++, AI/ML Prototyping & Deployment, Reverse Engineering
Creative: Graphic Design (Adobe Suite, Canva), Video Editing, Presentation Design
Leadership: Project Management, Public Speaking, Community Engagement, Strategic Planning

PROFESSIONAL EXPERIENCE

Bangladesh Computer Council, Dhaka, Bangladesh | Master Trainer   **Nov 2025 - Present**

- Delivered robotics, 3D printing, and drone technology training under a national ToT program impacting ~20,000 government educators.
- Prepared trainers for nationwide high school ICT curriculum rollout and improved frontier technology literacy among policymakers.

Product Lagbe, Dhaka, Bangladesh | Founder & CEO   **Sept 2022 - Present**

- Founded a 3D printing and prototyping startup that evolved from a small repair shop.
- Engineered FDM systems based on Klipper-Mainsail, achieving 200–300 mm/s print speeds.
- Developed custom 3D designs and electronics for industrial clients.

ICT Division, Dhaka, Bangladesh | Technology Consultant   **Jan 2025 – Present**

- One of the youngest consultants under the Digital Lab Setup 2.0 Project.
- Introduced 3D printing technologies to the Director General and senior officials.
- Leading the development of digital Lab manual educational institutions.

Polynomial Labs, Dhaka, Bangladesh | Managing Director   **April 2023 – Present**

- Conducted 100+ Workshops in various educational Institutes in Bangladesh.
- Mentored & led teams of young tech innovators for 80+ national and international competitions.
- Won the prestigious International Young Scientist Award by IYSA.

InnovateX Engineering, Dhaka, Bangladesh | Product Designer   **April 2024 – July 2025**

- Designed mechanical solutions for top textile firms in Bangladesh.
- Tested and simulated Military mission drones for the Air Force of Bangladesh.
- Developed Bangladesh's first SUAS flight certified flying and Payload deployment system.

Bangladesh Moon Landers Rover Team | Design Lead & Pit Crew Member   **April 2024 – April 2025**

- Led rover chassis and drivetrain design; finalist for NASA Human Exploration Rover Challenge 2025.
- Coordinated 3D printing and assembly workflows; supported field testing and pit operations.

Bettre Institute, Boston, Massachusetts, USA | Business Developer & Researcher   **Oct 2023 – Dec 2024**

- Conducted STEM education research in collaboration with Tufts University and Hack for Earth.
- Developed scalable models for project-based learning platforms.

KEY PROJECTS

- **Agrover – Automated Agricultural Robot :** Engineered a solar-powered robotic farming system integrating AI and IoT for soil analysis, irrigation automation, and crop health monitoring. Designed to enhance agricultural productivity sustainably. Published research based on this system in the Global Scientific Journal.
- **Bangladesh Moon Landers Rover :** Designed and built a lunar rover prototype selected as a NASA Human Exploration Rover Challenge 2025 finalist. Contributed to structural design and 3D-printed lightweight modular components.
- **Biomimicry in Robotics :** Developed spider-inspired rescue robots with adaptive mobility to navigate collapsed environments, enhancing disaster response capabilities.
- **Agrox – IoT-Based Agricultural Solution for Smart Farming :** Developed as part of Team Atlas for NASA Space Apps Challenge 2024. Built sensors using ESP32 for real-time soil moisture, temperature, and rainfall tracking, combined with AI-based crop disease prediction. Provided farmers with actionable data for climate-resilient agriculture.
- **Klipper-Mainsail Firmware :** Customized firmware upgrade for 3D printers that increased print speed to 250 mm/s while maintaining precision.

PUBLICATIONS

Assessment of IoT Enabled Robotic Systems for Enhancing Eficiency in Smart Farming: Analysis and Implications for Sustainable Agriculture and Climate Change Mitigation
Global Scientific Journal, Volume 12, Issue 10 · Nov 1, 2024

EDUCATION

Higher Secondary Certificate   **Mar 2022 - Nov 2023**
GPA: 5.00 / 5.00; Dhaka Imperial College, Dhaka, Bangladesh

Secondary School Certificate   **Jan 2019 - Nov 2021**
GPA: 5.00/5.00; Motijheel Government Boys' High School, Dhaka, Bangladesh

CERTIFICATIONS

CS229 : Machine Learning
Stanford University, California, USA

CS106A: Programming Methodology
Stanford University, California, USA

Python4Physics
University of California, Berkeley, California, USA

Physical Computing with MicroBit & Arduino
Lancaster University, Lancaster, United Kingdom

AWARDS & HONORS

Winner - Bangladesh ICT & Innovation Award 2025
National Champion & Gold Medalist – International Science & Innovation Fair - 2025
Global Finalist (Top 1%) – Student Unmanned Aerial Systems, USA - 2025
Top 10 & Global Finalist – NASA Human Exploration Rover Challenge, USA - 2025
Divisional Champion & Global Nominee - NASA International Space Apps Challenge Bangladesh 2024
Award Recipient - BTRC Best Young IT Contributor Award - 2025
Champion – Energy Transition Segment, Climate Justice Case Competition - 2024
Gold Medalist & IYSA Special Award - World Innovation Competition & Exhibition - 2024
Runners Up – National AI Olympiad - 2023
Champion – International IQ Olympiad - 2023
Gold Medalist – Bangladesh Region Rank 1 - International Math Olympiad (INDIA) - 2023
National Qualifier – World Robot Olympiad - 2022
Champion - IEEE YESIST12 – 2021
Gold Medalist – National High School Programming Contest - 2020
Champion - Prothom Alo KPBSC Science Festival - 2019