Khandaker Siam Ahmed

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Portfolio | LinkedIn | GitHub | GrabCAD

EDUCATION

Islamic University of Technology (IUT) Jan 2023 – 2027 (Expected)
B.Sc. in Mechanical Engineering *CGPA: 3.53 / 4.00*

- Awarded OIC Partial Scholarship – merit-based grant valued at USD 14,000.

Government Science College 2022
Higher Secondary Certificate (HSC), Science *GPA: 5.00 / 5.00*

TECHNICAL SKILLS

CAD / Simulation: SolidWorks (CSWA Certified), SolidWorks Simulation, Blender, Proteus

Programming: C, Embedded C, Python

Tools & Platforms: Arduino IDE, ESP32, YOLO (Computer Vision)

Core Competencies: CAD/CAM, FEA Analysis, Mechatronics, Control Systems, Embedded Systems

EXPERIENCE

Short Circuit – Co-Founder May 2025 – Present
Online Electronics Platform *Dhaka, Bangladesh*

- Launched an online electronics platform serving 100+ engineering students, generating over BDT 200,000 in revenue within the first quarter of operations.
- Optimised supply chain logistics by building direct relationships with wholesale vendors, achieving a consistent 15% profit margin on components.

Project Altair – IUT Mars Rover Team Nov 2024 – Present
Junior Executive, Mechanical & Manufacturing Subteam *Gazipur, Bangladesh*

- Led chassis/suspension design for Mars Rover; validated structural integrity using FEA static stress analysis in SolidWorks, contributing to the team ranking **18th globally** at URC.
- Authored design submissions for IRDC 2025 and ERC 2024; applied material science for optimal strength-to-weight ratio.

Project Aqua – IUT Underwater Rover Team Nov 2024 – Present
Junior Executive, Mechanical Team *Gazipur, Bangladesh*

- Produced high-fidelity CAD models and photorealistic renders (Blender) for technical reviews; secured **2nd Place** at the Underwater Vehicle Design Challenge, IIT Guwahati.
- Optimized subsystem assembly fitment for underwater vehicle prototypes, ensuring structural reliability under hydrostatic pressure.

TECHNICAL PROJECTS

Automatic Garbage Sorter System *Academic Project – Mechatronics & ML Integration*

- Designed a custom mechanical actuation system with herringbone gears and stepper motors to deliver precise torque transmission for multi-category waste sorting.
- Integrated an ESP32 microcontroller with a YOLO-based computer vision model to enable real-time automated classification and sorting.

Advanced Line Following Robot *Hobbyist Project – Embedded Systems*

- Built an autonomous robot with an OLED display interface, rotary encoder inputs, and an EEPROM-based menu system for configurable operation.
- Implemented a PID control algorithm and integrated ultrasonic sensors for high-speed line tracking and dynamic obstacle avoidance.

ACHIEVEMENTS & CERTIFICATIONS

- **Certified SolidWorks Associate (CSWA)** – Issued by Dassault Systèmes.
- **Champion** – Cezeri Lab Annual Project Competition, 2025.
- **2nd Place** – Underwater Vehicle Design Competition, IIT Guwahati, India.
- **2nd Runners-up** – Auto Sculpt Season 2, IUT Automobile Society.
- **Member** – International Association of Engineers (IAENG).