

Shamol Chandra Barman - Robotics Portfolio

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🤝 About Me

I am **Shamol Chandra Barman**, a Mechatronics Engineering graduate from **World University of Bangladesh (2024)** with hands-on experience in **Robotics, Embedded Systems, IoT, and Industrial Automation**. I am passionate about **Energy-Efficient Trajectory Planning, Robotics Simulation, and R&D in Automation**.

🔧 Skills

Robotics & Control Systems: Python Robotics, ROS2, PyBullet, MATLAB, PLC Automation

Programming & Embedded Systems: Python, C/C++, Arduino, STM32, Microcontrollers

Industrial Automation & IoT: PLC, SCADA, Sensors, Actuators, IoT Devices

Tools & Software: Git, GitHub, SolidWorks, LabVIEW, MATLAB/Simulink, Linux

📁 Projects

1. Multi-DOF Robotic Arm

- **Description:** Designed a robotic arm with 5 DOF for object manipulation using Python and C++.

- **Key Tech:** Python, ROS2, PyBullet

- **Repository:** [GitHub Link](<https://github.com/<YourUsername>/Robotic-Arm>)

2. Obstacle Avoidance Robot

- **Description:** Autonomous robot using ultrasonic sensors to navigate obstacles.

- **Key Tech:** Arduino, C++, Embedded Systems

- **Repository:** [GitHub Link](<https://github.com/<YourUsername>/Obstacle-Robot>)

3. Energy-Efficient Trajectory Planning (Research)

- **Description:** Physics-based simulation for optimal trajectory in industrial robot manipulators.

- **Key Tech:** Python, PyBullet, MATLAB

- **Repository:** [GitHub Link](<https://github.com/<YourUsername>/Trajectory-Planning>)

🎓 Education

- **BSc in Mechatronics Engineering** – World University of Bangladesh, 2024

💼 Internships & Research

- **EMP Research Project** – Energy & Motion Profiling

- **QC / R&D Internship** – Automation & Robotics Testing

- **Industrial Automation Projects** – PLC-based systems, IoT monitoring

💬 Contact

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