Nurul Islam

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EDUCATION

Bachelor of Science in Electrical and Electronics Engineering
University of Scholars| Dhaka, Bangladesh — Expected September 2028

High School Certificate
M.A Hashem College | Begamgang, Noakhali — Expected june 2023

TECHNICAL SKILLS

- **Engineering:** Embedded Electronics, IoT (Espressif), Circuit and PCB Design (Altium Designer, KiCad), 3D modeling (Solidworks, Fusion 360)
- **Computer Science:** C, C++, Python, MATLAB
- **Language**: English-Upper Intermediate, Bengali-fluent

EXPERIENCE

Drishti Technologies, Banani, Dhaka, Bangladesh — feb 2024 - December 2024
Embedded System Engineer — On-site

- **PCB Design:** Designed multi-layer PCBs using Altium Designer and KiCad, from schematic capture to layout and signal integrity analysis.
- **3D Modeling:** Created 3D models and simulations in SolidWorks for PCB assemblies and enclosures, validating design fit and function.
- **Embedded Systems:** Developed firmware for microcontrollers, enhancing product performance and reliability.
- **Prototyping:** Built and tested prototypes, resolving design issues and improving efficiency.

Fiverr — March 2022 - June 2023
Freelance Arduino projects Developer — *Online*

- As a Fiverr freelancer, I develop custom Arduino projects, including coding, circuit design, and sensor integration. I ensure optimal performance through debugging and troubleshooting, and provide clear documentation to clients. My work consistently earns positive feedback for its quality and reliability.

Bees Robotics, Dhaka, Bangladesh — March 2020 - Present
Robotics Engineer — *Remote*

- At Bees Robotics, I developed autonomous robots, designed PCBs, implemented PID controllers, and used SolidWorks for CAD design. I programmed microcontrollers, integrated sensors, and motor drivers, ensuring reliable and efficient robot performance.

PROJECTS

Self-Driving Car — june 2022

- This project involves developing a self-driving car that uses a combination of Raspberry Pi, Arduino, and machine learning techniques. The car is designed to autonomously navigate a track by following a designated line while detecting and avoiding obstacles. The Raspberry Pi serves as the central processing unit, running machine learning algorithms to interpret sensor data and make real-time driving decisions. The Arduino handles low-level control tasks, such as motor management and sensor integration. The project aims to demonstrate advanced autonomous navigation capabilities and adaptive obstacle avoidance.

Autonomous Trash Collector Robot — January 2023

- This robot follows a black line to navigate a track, using an arm with a gripper to pick up trash from black boxes. It collects the trash in an onboard container and, after all boxes are collected, moves to a designated finishing point.

HONORS AND AWARDS

- National Level Bronze medalist in Robot Gathering Competition | BDRO | November 2021
- Champion in Robonix Competition |SUST| December 2022
- 2nd please in Autonomous Trash Collector Robot Competition |BUET| January 2023
- 2nd please in Line Follower Robot Competition | RUET | July 2022