Rahgir Arefin Rafi

Mechatronics Engineering Student
Robotics and Artifical Intelligence Enthusiast

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Work Experience

President

Notre Dame Art Club
December 2020 - June 2022

Activities:

- Organized all the events of this club during the mentioned timeline.

Education

B.Sc in Mechatronics Engineering

Rajshahi University of Engineering and Technology, Rajshahi
January 2023 - Present

Personal Projects

Cumulonimbus: A Line Follower Robot

Project Link: https://github.com/rahgirrafi/Cumuonimbus2
A highly optimized Line Follower Robot operating system for Arduino Development Board which contains the following features:
-I/O using 3 buttons and OLED display.
-Onboard critical tuning such as PID Parameters, Motor Speed.
-On board calibration and saving the information for later use
-Fine Tuned Control with PID autotuning and Kalman Filtering.

Weed Detection System

Project Link: https://github.com/rahgirrafi/weed_detection
A raspberry pi based real-time weed detection and Geotracking system that uses yoloV5 model and openCV to capture video and detect weeds and uses ROS for collaboration.

Skills

C++ | Python | Machine Learning | C | PCB Desiging | ROS | Microcontroller | Microprocessor | Embedded Systems

-C/C++: Equally comfortable with Procedural, OOP and Embedded programming.
-Python: Using python regularly for AI competitions in Kaggle.
-PCB Designing: Designed Custom shields, boards, arrays for personal projects.
-Comfortable with Linux Environment and Command Line interface.
-Can work with ROS (RObot Operating System
-Microcontroller: Have experience with Arduino and ESP32.
-Microprocessor: Have experience with Raspberry Pi
-Embedded System: Familiar with the concepts of memory management, realtime constraints, interrupt handling, peripheral programming, embedded C/C++.

Languages

Bangla
Native Proficiency
English
Professional Working Proficiency

Certification

Supervised Machine Learning: Regression and Classification
Stanford Online
Advanced Learning ALgorithm,
Stanford online
Unsupervised Learninmg, Recommenders, Reinforcement Learning
Stanford Online
Machine Learning Specialization

Ogranisations

Notre Dame Art Club
June 2019 - June 2022
Robotics Society Ruet
September 2023 - Present

Interests

Automation | Robotics | Artificial Intelligence | Research