Bipin Saha

ML Engineer
Business Automation Ltd.
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Links

Github:// **bipin-saha**
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Skills

OS

GNU/Linux, Windows

LANGUAGES

Python, C/C++, MATLAB

FRAMEWORKS

PyTorch, Transformer, Scikit-Learn, OpenCV, Pandas, Numpy, Flask, Streamlit, NLTK, Spacy

DATABASES

MySQL, PostgreSQL

TOOLS

Git, Coppeliasim, Simulink, Proteus, Easy-EDA

PLATFORMS

Arduino, STM32, ESP32/8266/TTGo RPi

DOCUMENTATION

Origin Pro, LaTeX, Adobe Photoshop, Premier Pro

Education

JAN 2017 - SEPT 2022
BSc in Electrical and Electronic Engineering
University of Rajshahi
CGPA : 3.X8/4.00

Coursework

Data Structures
Algorithm
Neural Networks
Discrete Mathematics
Operating Systems
MySQL
Data Analysis

Experience

Machine Learning Engineer
Business Automation Ltd. **December 2023 - Present**

Experienced in Bangla sentiment analysis using LSTM and Transformer models. Skilled in fine-tuning datasets for Daily Task Summarization with LLM Transformer models. Proficient in Medical Prescription Segmentation and Text Retrieval through OCR, showcasing versatile expertise in language processing applications.

Assistant IoT Engineer
Get-Aid. Ltd. **January 2023 - November 2023**

Experienced professional adept in developing Object Detection pipelines using YOLOv5 and YOLOv8 for grocery product recognition, achieving high mAP scores. Skilled in implementing 5-DOF inverse kinematics robotics manipulators for 3D space navigation. Proven track record in enhancing PID control accuracy for precise robotic system navigation.

Computer Vision Research Intern
Brainekt AI Lab **October 2021 - January 2022**

Contributed to the Road Bot project, focusing on face data recognition. Proficient in implementing Deep Learning algorithms for accurate recognition of nine facial expressions.

Research | Google Scholar | ResearchGate

An Efficient Approach for Appearance-Based Eye Gaze Estimation with 13 Directional Points. [DOI]

In 2021 International Conference on Computer, Communication, Chemical, Materials and Electronic Engineering (IC4ME2) 2021 Dec 26 (pp. 1-5). IEEE.

Numerical Modeling of CuSbSe2-based Dual-Heterojunction Thin Film Solar Cell with CGS Back Surface Layer. [DOI]

AIP Advances. 2023

Projects | Full Project List

Behavioral Cloning of Self Driving Car (Udacity, Simulation)

Developed an End-to-End CNN and train model for planning trajectory at hill road track. The average speed of the vehicle is around 10 MPH. Designed a PID controller module, which is responsible for maintaining trajectory stability.

Robot RRT Path Planning (Simulation)

The tree is constructed incrementally from samples drawn randomly from the search space and is inherently biased to grow towards large unsearched areas of the problem.

Teleoperated Quadcopter for Aerial Mapping

Build a four-rotor quadcopter which provides 20 minutes of flight time. The project's purpose was aerial mapping. Omnidirectional control range – 10KM. IMU, and GPS provide hovering stability. Gird mapping is used for path planning.