SOUMIT DAS

portfolio | github | linkedin

Personal Info

Date of Birth : October 4, 2000
Nationality : Bangladeshi

Language : Bangla & English
IELTS Score : Overall 7.00

Contact Info

+880 1871-773734
1803063soumit@gmail.com

Address

Permanent Address : Nandipara, Village: Sultanpur, Thana: Raozan, District: Chattogram

Present Address : 9 Jamal Khan Rd, Thana: Kotwali, District: Chattogram

Expertise

Programming Language

C, C++, Python, Java, JavaScript, HTML, CSS, x86 Assembly

Technologies

Keras, TensorFlow, FastAPI, MLOps, DVC, Node.js, React.js, MySQL, MongoDB.

Research Fields

Computer Vision, Image Segmentation, Optical Character Recognition (OCR), Image Classification, Machine Learning, Deep Learning.

Problem Solving

Solved 500+ problems and uploaded some solutions to GitHub.
Link : *github.com/soumit1803063/problem_solving*

Implemented various AI algorithms using raw Python.
Link : *github.com/soumit1803063/AI*

Conferences

Daffodil International University & Jahangirnagar University
2nd International Conference on Big Data, IoT and Machine Learning – (BIM 2023)

Dhaka University of Engineering and Technology (DUET)
3rd International Conference on Advancement in Electrical and Electronic Engineering– (ICAEEE 2024)

Education

Bachelor of Science — CGPA: 3.55 out of 4.00 — Passing Year: 2024
Computer Science & Engineering — Rajshahi University of Engineering & Technology

Higher Secondary School Certificate — GPA: 5.00 out of 5.00 — Passing Year: 2018
Science — Govt. City College, Chattogram

Secondary School Certificate — GPA: 5.00 out of 5.00 — Passing Year: 2016
Science — Nasirabad Govt. High School

Projects

Cycle Theft Detection and Surveillance System
Tools: Python, OpenCV, YoloV8, DeepSORT, JavaScript, Firebase.
Computer Vision | Data Structures | Algorithm

This project monitors cycles in a garage using CCTV cameras. It detects thefts, providing real-time information on the thief, owner, cycle image, and time of theft on a live website.

Parcel Counter
Tools : OpenCV, YOLOv8, Deep SORT
Computer Vision | Object Detection | Reidentification
https://tinyurl.com/5dx9p2kv

The project was developed to count parcels on a conveyor belt by detecting and tracking them within a defined region of interest. The system also incorporates an innovative algorithm for reidentification after power outage to ensure accurate parcel counting without duplication.

Virtual Painting
Tools: Python, OpenCV, MediaPipe, Tkinter.
Computer Vision | GUI | Desktop Application
github.com/soumit1803063/Virtualpainting

This project enables painting with hand gestures using a GUI for seamless interaction.

Malware Detection
Tools : Python, Pandas, Numpy, Scikit-Learn.
ML | Feature Engineering | Hyper Parameter Tuning
github.com/1803063soumit/UNSWNB15

This is a machine learning project on malware detection using the UNSW-NB15 dataset. The project aims to develop a robust model for identifying malicious network traffic.

Research & Publications

Advancing Glioma Segmentation: A Robust 3D Residual Attention U-Net Framework for Multimodal MRI Images
Thesis | ICCA 2024 | ACM | Accepted and yet to be published — **2023 - 2024**

This research presents a robust 3D Residual Attention U-Net for segmenting subregions of brain tumors in multimodal MRI images, achieving higher accuracy with less training time and resources. A part of the work (only whole tumor segmentation) has been submitted and accepted for presentation to a reputed conference.

BanglaOngko: A New Dataset for Accurate Bengali Mathematical Expression Detection Utilizing YOLOv8 Architecture
Taylor and Francis | BIM2023 | Accepted and yet to be published — **2023**

In this research, handwritten Bengali mathematical expressions were converted to printed text. YOLOv8 was utilized to identify the positions of digits and operators. Subsequently, a novel algorithm based on statistical concepts was developed to generate the final printed version of the expressions.

CBAM Enhanced Collaborative Network for Binary Classification of Breast Tumours
IEEE | ICAEEE2024 | DOI : 10.1109/ICAEEE62219.2024.10561843 — **2024**

This research aims to classify breast tumors as benign or malignant using a neural network with two distinct paths: a collaborative path and a transfer learning path. The network incorporates a Convolutional Block Attention Module (CBAM) to improve performance. By leveraging these advanced deep learning techniques, the proposed model achieves superior accuracy in tumor classification compared to state-of-the-art models.

Reference

Professor Dr. Md. Ali Hossain
Professor
Department of Computer Science & Engineering
Rajshahi University of Engineering & Technology
Phone: +880 1959-600498
Email: ali.ruet@gmail.com
Website: ruet.ac.bd/aliruet

Md. Farukuzzaman Faruk
Assistant Professor
Department of Computer Science & Engineering
Rajshahi University of Engineering & Technology
Phone: +880 1725-344079
Email: faarukuzzaman@gmail.com
Website: ruet.ac.bd/farukuzzaman