RAJARSHI BANERJEE

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EDUCATION

University of Calcutta

B.Tech in Optics and Optoelectronics Engineering (2018-2022)

GPA: 8.00/10.00

MOOC CERTIFICATION

- Data Structure with python by Sandeep Jain from GeeksforFeeks (certificate)
- Elements of AI from the University of Helsinki (certificate)
- Computer vision with Python from Udemy (certificate)
- Computer vision from Kaggle (certificate)
- Winter School of Deep Learning from ISI Kolkata (certificate)

SKILLS

PROGRAMMING LANGUAGES

Python | C++ | JavaScript | HTML | CSS | Latex | SQL

FRAMEWORKS AND TOOLS

PyTorch | Scikit-Learn | OpenCV | NumPy | Pandas | NLTK | Django | tkinter | keras

PUBLICATION

Presented a paper in the ICCET2022 conference, which was published in the International Journal of Science and Innovative Engineering & Technology (IJSIET). Topic: Human-computer interaction Controlling mouse functionalities using hand gestures. (abstract)

EXPERIENCE

Centre for Development of Advanced Computing | Machine Learning Research Intern

June 2022 – Dec 2022

- I collaborated with a team to develop AutoNN, A No-code Automated machine learning framework in python. This framework offers simplified model training tools for classification and regression that require no prior machine learning or coding knowledge. Github website
- As a team leader, I successfully developed a computer vision application utilizing OpenCV, **Mediapipe**, **easyocr** and **tkinter** to convert handwritten words created through hand gestures into machine-readable text format.
- Developed a computer vision application that enables hands-free control of mouse functionalities and keyboard shortcuts through gesture recognition. This was achieved through the utilization of **OpenCV** and **mediapipe** technologies.

Indian Statistical Institute, ISI Kolkata |Project Intern

Sept 2021 – Jun 2022

- Did my bachelor's project focused on the classification of fundus images for diabetic retinopathy using deep learning. To accomplish this, I used state-of-the-art EfficientNet architecture to train the model on the manually augmented Messidor dataset, which was able to attain 84.91% accuracy on the test set.

PROJECTS

Personal Projects

Sorting Algorithm Visualizer: Designed a GUI application using the **Tkinter** written in **python** to visualize various sorting algorithms.

SnakeAI: Utilizing a combination of a neural network and **genetic algorithm** employed in **PyTorch**, the AI was trained to master the gameplay of Snake.

Pytorch model summary library: Developed a python package to retrieve the model summary of models created in PyTorch.

HOBBIES

I tend to document my learning and share my knowledge in the form of videos on YouTube. Most of my learning revolves around mathematics, computer science, and artificial intelligence. [link]