Subhranil Nandy

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Education

Indian Institute of Engineering Science and Technology (IIEST), Shibpur, Howrah, 2022 – 2026
B.Tech, Information Technology (IT)
CGPA 9.31/10 | Upto 4th Semester

M. C. Kejriwal Vidyapeeth, Liluah, Howrah, *ICSE, ISC*
ISC(XII) (PCM, CS and English) - 96.5% (2022)
ICSE(X) – 96.6% (2020)

Experience

Indian Institute of Technology, Kharagpur, *Summer Research Intern* May 2024 – Jul 2024
Kharagpur, West Bengal
- Dept.: Center of Excellence in Affordable Healthcare (CoE-AH)
- Worked on smart healthcare edge devices for measuring a person's vital signs.
- Created a wearable health device prototype that tracks heart and breathing rates in real-time with a mean absolute error **(MAE)** of around ***1.0*** units.

GirlScript Summer of Code (GSSoC'24), *Open-source Contributor* May 2024 – Jul 2024
- Ethnicity Classification of Asian People
- Pneumonia Classification using Chest X-Ray

Projects

MNIST Handwritten Digit Classification Web app, *Tensorflow, Pandas, Matplotlib, Python | Link* Mar 2024 – May 2024
- Used Data augmentation, Deep Neural Networks (DNN) and CNNs, achieving an ***accuracy of 99.45%*** on the MNIST test dataset (Hosted using *Streamlit*)

Facial Emotion, Age and Gender extraction from Raspberry Pi based Video Surveillance with low cost webcams, *Raspberry Pi 3B+, OpenCV, Tensorflow, Python* Mar 2024 – May 2024
- Conceptualised an edge device consisting of Raspberry Pi integrated with a webcam.
- Created lightweight models using ***Tensorflow lite (.tflite) models*** to recognize gender, emotion and age from ***real-time*** videos captured using the webcam (edge device).

Pneumonia Classification using Chest X-Ray images, *Tensorflow, Pandas, Matplotlib, Python* Ongoing (Hobby)
- Currently experimenting with CNN architectures and different transfer-learning models like VGG16, MobileNet, and ResNet to achieve an efficient performance.
- Achieved an ***accuracy of 93%*** so far on binary classification.

Technical Skills

Languages and FrameWorks :, *Java, Python, C, MATLAB, TensorFlow, Keras, scikit-learn, OpenCV*

Tools and Technologies:, *VS Code, JupyterLab, Anaconda, Linux, Git and GitHub, Raspberry Pi, Arduino*

Publications

Deep Feature Learning for Detecting Water Pollution from Industrial Waste, 2024
Sneha Singh, Suranjana Saha, Subhranil Nandy, Dr. Mahua Nandy Pal, Dr. Tien Anh Tran
Accepted in 8th International Conference On Emerging Applications of Information Technology, 2024, Kolkata. Will be published in "Lecture Notes in Networks and Systems", Springer Nature (In press)

Achievements

Jagadish Bose National Science Talent Search (JBNSTS) Scholarship 2021 – 2022
Among the 203 Scholars selected for the JBNSTS Junior Scholarship from West Bengal in 2020.

Exam Ranks, • *JEE Advanced: AIR 5556* • *JEE Main: AIR 12943* • *WBJEE: Rank 843* 2022

Courses

Advanced Learning Algorithms, *DeepLearning.AI | Certificate*

Machine Learning Crash Course with TensorFlow APIs, *Google*

Quantum Explorers (Using Qiskit SDK), *IBM | Badge*

Interests

Synthesizer | Fitness Enthusiast | Singing | Reading