# 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 prototype for a wearable health device that tracks heart and breathing rates in real-time with a mean absolute error **(MAE)** of around ***1.5*** units.

## 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 Junior Scholars selected for the JBNSTS Junior Scholarship from West Bengal in 2020.

**Exam Ranks** 2022

- JEE Advanced: AIR 5556
- JEE Main: AIR 12943
- WBJEE: Rank 843

## 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