# Bibhash Pran Das

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#### **EDUCATION**

## National Institute of Technology, Rourkela

July. 2018 – Present

B. Tech in Electronics and Instrumentation Engg., Minor in Computer Science and Engg.

CGPA: 8.91

#### EXPERIENCE

### University College Dublin, Ireland

May. 2021 – Nov. 2021

Summer Research Intern

- Formulate methodology for surface NO2 concentration estimation based on satellite data
- Collect, analyze and clean Sentinel 5-Precursor satellite Data
- Paper published at PIERS 2021

# Intelligent Systems Laboratory, NIT Rourkela

October 2020 – May 2022

Undergraduate Research Assistant

- Proposed a method for estimation of resizing factor for a double compressed JPEG image
- Developed deep learning pipeline for the task yielding accuracy of 83% which beats previous benchmarks.
- Conference paper published at IEEE ICORT 2021

#### **Publications**

- **B. Das**, M. Biswal, A. Panigrahi, M. Okade, "CNN Based Image Resizing Detection and Resize Factor Classification for Forensic Applications", *IEEE International Conference on Range Technology*, 2021 10.1109/ICORT52730.2021.9581459
- **B.P. Das**, M.S. Pathan, Y.H. Lee, S. Dev, "Estimating Ground-level Nitrogen Dioxide Concentration from Satellite Data", *Photonics and Electromagnetics Research Symposium (PIERS)* 2021 10.1109/PIERS53385.2021.9694752

#### PROJECTS

# Content Based Image Captioning | Python, Flask, Tensorflow, HTML/CSS

March 2021

- Developed a web application using Flask serving a Tensorflow model with a HTML/CSS frontend
- Trained an end to end model using InceptionV3 and LSTM architectures and deployed web app. Link Here

#### ICU Patient Health Monitoring Systems | Python, Scikit-Learn, Flask, HTML/CSS

January 2021

- Developed sensor framework to record and transmit patient vitals and parameters in real time
- Designed and deployed ML model to predict life expectancy based on this data with accuracy of 90% Link Here

# Neural Style Transfer for Images | Python, Tensorflow, Flask, HTML/CSS

October 2020

- Developed a pipeline for style transfer for images based on research by Gatys et al
- Used tensorflow framework to implement model and flask to deploy it Link Here

# TECHNICAL SKILLS

Languages: Python, C++, C, MySQL, HTML5/CSS

Frameworks & Libraries: Tensorflow, Keras, Pytorch\*, Pandas, Numpy, Scikit-learn, openCV, PIL, NLTK, Seaborn,

Matplotlib, Plotly, Flask, Selenium, BeautifulSoup

Developer Tools: GIT, Github, PyCharm, GoogleColab

# ACHIEVEMENTS

#### Academic Excellence Award

2018

Received academic excellence award from the branch of EIE

#### Google Brain Ventilator Pressure Prediction Challenge (Kaggle)

2021

Ranked in top 5%

# Extra Curricular Experience

#### Coordinator at ML4E

2020 - 2021

Official Machine Learning club of NIT Rourkela

# Member at Leo NIT Rourkela

2018 - 2022

Social Service club