

# Suyog Jadhav

## EDUCATION

### IIT (ISM), DHANBAD

BTECH IN ELECTRONICS AND COMMUNICATION

May 2021 | Dhanbad (JH), India  
Cum. GPA: 8.205 / 10.0

### MODERN COLLEGE, PUNE

Grad. May 2017 | Pune (MH), India

## LINKS

Mail

Website

Google Scholar Profile

Complete Unabridged Resume

Github:// IAmSuyogJadhav

LinkedIn:// IAmSuyogJadhav

Twitter:// IAmSuyogJadhav

## SKILLS

### PROGRAMMING

Very Familiar:

Python • PyTorch • API and backend development (Flask) •

Linux • Git • Google Cloud Platform

Over 1000 lines of code:

C • C++ • Matlab • Regex • CSS •

Keras • TensorFlow

Familiar:

Shell • Javascript • Batch

## AWARDS/SCORES

### GOLD MEDAL | DEC 2019

Ashoka's Tech for Change Challenge at 6<sup>th</sup> Inter-IIT Tech Meet

### 2<sup>ND</sup> /150 TEAMS | SEP 2019

CDAC AI Hackathon 2019 sponsored by Nvidia

### 2<sup>ND</sup> RANK | APR 2020

EndoCV Challenge (Single Frame Object Detection track), 17<sup>th</sup> IEEE ISBI (2020) [2]

### 4<sup>TH</sup> /300 TEAMS | JAN 2019

PanIIT Mission AI: Solve for India Hackathon

### IELTS BAND 8/9 | OCT 2020

CEFR Level: C1

## EXPERIENCE

### UIT- THE ARCTIC UNIVERSITY OF NORWAY | RESEARCH INTERN

Apr 2020 - Aug 2020 | Tromsø, Norway

Worked on two different projects during the course of this internship.

- Application of deep learning for illumination estimation in Fourier ptychography microscopy (FPM);
- Artefact removal from MUSICAL nanoscopy images using deep learning.

### CANCER MOONSHOT INC. | DEEP LEARNING R&D INTERN

Jun 2019 - Jul 2019 | Bangalore (KA), India

Worked on developing a deep learning model for segmentation of cancer lesions from prostate MRI scans.

- Trained UNet model with custom modifications to fit the extremely small ground truth labels. Used data augmentation techniques to improve the performance of the model.

## PAST RESEARCH PROJECTS

### ARTEFACT REMOVAL FROM NANOSCOPY IMAGES | AUG 2020

MUSICAL is a nanoscopy method that produces a high-res output from a temporal stack of fluorescence microscopy images. The produced MUSICAL image has artefacts due to input noise. I worked on simulating 3 different subcellular structures and training autoencoder models for denoising the produced MUSICAL images. *Accepted in Biomedical Optics Express (Dec. 2020) [1].*

### DEEP LEARNING IN FOURIER PTYCHOGRAPHY | JUN 2020

Fourier Ptychography is a microscopy technique that uses low-res images taken from multiple angles to generate a high-res image. I implemented the complete pipeline including the object detection based illumination angle estimation model, calibration and the final reconstruction algorithm adapted from Aidukas et. al. 2018. *Published in Optics Express Journal (Dec. 2020) [3].*

### CHESTX | SEP 2019

Developed a computer-aided diagnosis system for detecting 14 chest abnormalities from X-ray scans. Used a novel 3-stage deep learning architecture and achieved a maximum AUC score of 0.91 (on Emphysema) with the average AUC score being 0.84. The system also calculates and displays the class activation maps for each of the classes, aiding in interpretation of the results. Secured 2nd rank in CDAC AI hackathon 2019 co-sponsored by Nvidia.

→ DETAILS ABOUT MORE PROJECTS CAN BE FOUND ON my [GitHub profile](#)

## PUBLICATIONS

- [1] S. Jadhav, S. Acuña, K. Agarwal, et al. Artefact removal in ground truth and noise model deficient sub-cellular nanoscopy images using auto-encoder deep learning. *Biomedical Optics Express*, Dec. 2020.
- [2] S. Jadhav, U. Bamba, A. Chavan, R. Tiwari, and A. Raj. Multi-plateau ensemble for endoscopic artefact segmentation and detection. *Proceedings of the 2nd EndoCV Workshop in conjunction with the 17th IEEE ISBI*, Apr. 2020.
- [3] F. Ströhl, S. Jadhav, B. S. Ahluwalia, K. Agarwal, and D. K. Prasad. Object detection neural network improves fourier ptychography reconstruction. *Opt. Express*, 28(25):37199–37208, Dec 2020.