SOUMYADIP SARKAR

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INTERNSHIP

Machine Learning Engineer Intern

Indian Institute of Technology, Kharagpur (IIT, KGP)

1st January – 30th April 2021 | Remote

- My work was to perform different Machine Learning and Deep Learning techniques on remote sensing (Polarimetric Synthetic Aperture Radar) data.
- Worked on **Mask RCNN** for training segmentation model, improved accuracy(pixel) to 86%, improved performance of **K-means** Clustering for urban image segmentation(specially building),
- Worked on **MINE**(Mutual Information Neural Estimation) and integrating **Ge2e**(Generalized End-to-End) Loss with an image colorization Deep Learning model.

PROJECTS

1. Resume Analyzer

- A web-app for recruiters, which can help to select candidates quickly.
- **Worked on Data Preparation (web-scrap) + Resume Score Prediction + Resume Summarization + Model Deployment.** Used Tensorflow, sklearn, Spacy, flask, streamlit.

2. ERA5-Land Data Analysis

- It's a **Geo-spatial Data** based project, and I did the Data Analysis and Model Building. Used xarray, PyTorch and CDSAPI.

3. Music Generation Using Deep Learning

- Used **ABC sheet music** for building a character level **LSTM** model for music generation. Used tensorflow, NLTK

4.SIIM-ISIC Melanoma Classification

- It was a kaggle challenge, Identified if the image represents malignant or benign. **Used ResNet101, VGG19 and Image pre-processing for hair removal.**

5. Smart Exam Form

- A web-app, a clone of Google Forms but with essay **automated grading system for exams**. Used Flask,tf2.x,gensim,NLTK.

6. Doctor In A Browser

- Quick and Accessible Health Assistance - **Fully Functional Machine Learning based Web Application with Dashboard for Medical Diagnosis Reports, maternal Chabot and Government Verified Certification via Email Listings.**
- Used Flask, Tensorflow, Sklearn, Dialogflow, chatterbot etc.

7. Face Mask Detection

- Face Mask Detection using Deep Learning: a simple GUI based application for face mask detection. Used treditional approach for the detection.
- Used tensorflow2.x,opencv, haar cascade,CNNs, TKinter etc.

EDUCATION

B.Tech in Electrical Engineering

Institute of Engineering and Management, Kolkata

July 2022

8.18 CGPA

SKILLS

Strong At:

Machine Learning | Deep Learning | Computer Vision | NLP | Web Scrapping

Python | C++ | Tensorflow | Pytorch | Opencv | flask | streamlit | Git | Dialogflow

ACHIEVEMENTS

1. Ranked **7th** at Octahacks:3.0 **out of 456 teams**.
2. Kaggle Kernel Expert: Highest rank **485 out of 148,467** people worldwide.
3. Top Contributor: Top Contributor at DSC-IEM during Hacktoberfest in their AI repository.
4. Participated in SIIM-ISIC Melanoma Classification challenge: 7.76 LB score. It was my 1st Kaggle challenge.
5. Participated in Hackoff:3.0 a MLH hackathon: got **29th rank out of 129 teams** all over the world.

ACTIVITIES

- *IEM computer vision group member*
- *Coding Blocks Campus Ambassador*
- *IEDC Lab member (ML team)*
- *DSC IEM Member*