Soumyabroto Banerjee

ML/DL Developer at Adben Industries Pvt. Ltd.

Final Year Student deeply interested in Deep Learning, taking keen eye to develop ML models. Working as a Freelancer for Tata Steel for various Business Intelligence Projects. Working as ML/DL Developer at Adben Industries for Implementing Real Time Low Cost Computer Vision Projects. Basically playing to make AI look and earn better. Looking for Freelancing, Internships and Collaboration Projects. Worked in multiple AI domains.

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EDUCATION

Institute of Radio Physics and Electronics,
University of Calcutta

06/2016 – Present *CGPA : 9.25*

Courses

- Electronics and Communication Engineering

PERSONAL PROJECTS

Reco AI (04/2020 – Present)

- It is a project with Adben Industries Pvt Ltd.
- It provides feasible low cost face recognition on AWS. It is hosted currently on a low cost AMI without a GPU. It is highly optimised using Tensorflow and a custom CNN and SVM support on Recognition. In backend it uses a Frozen FaceNet.
- Special Features :
- High Accuracy Facial Detector - Able to detect Side faces, Frontal Face even in low light and highly optimised using caffe. (20-25 FPS on Intel i3 CPU)
- Highly optimised Liveness Engine to detect Fake Images from Real People.
- HIghly Accurate and optimised Mask Detector- Can detect Covid 19 only masks and reports.

Cluster Learner (06/2019 – Present)

- It is a Project with Jadavpur University under Dr. Ram Sarkar (CSE)
- It proposes a Novel Clustering algorithm to mobilise Clustering shapes as a metric of cluster evaluation.
- It Learns by iterating a 3-way ensemble of Weak Learners and Learning from Previous Iterations by shaping the cluster points in a Particular Fashion after every iteration so that the accuracy is not below a threshold.
- Achievements : Accuracy is above 90% for Public Datasets - Ionosphere, Glass, Waveform, WDC, Shuttle, etc

Analytics Insight Q-4 2019 (06/2019 – 08/2019)

- It is a project with Tata Steel Ltd.
- Proposes a 5 way model with Bagging and Boosting Classifer to predict the Sales growth, Prediction of Red Delay Customers and Accumulation for the Next Week.
- Uses an on Oversampler to tackle the problem of Imbalanced Dataset.
- It can Predict the Customers who are likely to cause delay in payments too.
- It uses a Bagging and Voting method to achieve an Accuracy of over 82%.

Drone Making using Low Cost Flight Controller (2018)

- It is in association to IIT Roorkee Tech Fest Cognizance.
- Myself along with a team of 3 others from my college designed a way to build a low cost flight controller using basic Arduino Uno feeding a standrad PID control.
- The cost was drastically brought down to ~ 12k INR
- It was a fully funded project by TEQIP PH-III, 2019, Govt of India and University of Calcutta, Govt of West Bengal.
- We lost to Market Like professional Flight Controller in the Special Skill Test.

MOCHAi (2018)

- IoT and AI enabled Car controller by basic phone DTMF tones able to detect objects from highly optimised ImageNet and Tensorflow. It can be combined with a Drone for Biosphere coverage - aerial and ground.
- Declared Second in STEX'2018, CU.

SKILLS

Deep Learning | Machine Learning | Computer Vision | Business Analytics | Time Series Analysis | Arduino Based Drone Making

ACHIEVEMENTS

Tata Millennium Scholar (2016 – Present)
A scholarship for A- Grade college students by Tata

IEEE EDS Member (2018 – 2019)
Organised a talk by the VP of Sam Foundry. Also organised various meetings and initiatives for learning.

STEX' 2018
Second Position

ORGANIZATIONS

Adben Industries Pvt Ltd
ML/DL Developer

Tata Steel (06/2019)
ML Intern

Eastern Railways (2019)
Networking Intern

Tata Steel
PLC Developer Intern

Jadvpur University
Research Intern

CERTIFICATES

Deep Learning Specialisation
Coursera

Sequences, Time Series and Prediction
Coursera

Introduction to Machine Learning
NPTEL

Embeded Systems Design
NPTEL

AI for Medical Diagnosis
Coursera

Learning Python GUI Programming
LinkedIn