ABHIK MAITI

Data Scientist, PRM Fincon
Computer Vision | Machine Learning | Deep Learning

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Remote

Highlights

Education **Achievements** **Work Experience**

B.Tech
IIT Kharagpur
2009 - 2013

M.Tech
IIT Kharagpur
2013 - 2014

1 patent filed

Senior ML Engineer
Infrrd AI
2018 – 2019

IITJEE rank : ***4143***
WBJEE rank : ***49***

GATE rank : ***17***

7 international publications

Senior Researcher
IIT Kharagpur
2014 - 2018

Data Scientist
PRM Fincon
2019 - Present

Accomplishments

Models in production

- ✓ ***End-to-end page layout analysis*** module for table,column and cell extraction of scanned and electronic PDF documents using ***YOLOv5 (mAP 91)***
- ✓ ***In-house OCR module*** custom-trained model for accurate text recognition in scanned/noisy documents.
- ✓ ***ResNet50*** based module for ***object detection and classification of different rooms*** present in household.
- ✓ ***EffecientNetV2*** based model for classifying financial annual reports into different classes having ***extreme class-imbalance (1:50 – 1:100).***
- ✓ Visual attention based CNN model for ***detection of eye diseases from fundus images***

Models in development

- ➢ Developing a Generative Adversarial Network based Cycle-GAN pipeline for denoising scanned documents.
- ➢ Developing a image-less model training pipeline for end-to-end training of OCR model from wiki text dumps.
- ➢ Developing multi-task learning network for joint classification + object detection task for medical images.

Specialization

90% **Deep Learning**

80% **Machine learning**

Technical Skills

- Image Detection, Classification
- Clustering, SVM, Regression
- Neural Network: CNN, LSTM, RNN
- Siamese network, Similarity learning
- Data Preprocessing, Visualization
- Generative Adversarial Networks
- Statistical modelling

Relevant Tools

Keras, Tensorflow	Advanced
Python	Advanced
Matlab	Comfortable

Career in Numbers

8	7
years of experience	Publications
5	76
Models in production	Citations

Patent filed

"Real time surface defect analysis and correction in friction stir welding process by image processing" – Patent Drive 2016

Publications

"Reflectance spectroscopy based rapid determination of coal quality parameters– Fuel (2020)

"Diffuse reflectance spectroscopy based rapid coal rank estimation: A machine learning enabled framework" - Spectrochimica Acta (2021)

"A k-means clustering–based approach for 3D mapping and characterization of rock faces using digital images." – AJG (2021)

"3D reconstruction–based numerical modeling of irregular-shaped geo-objects using digital images: a novel approach." – BEGE (2021)