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Computer Vision | Machine Learning | Deep Learning

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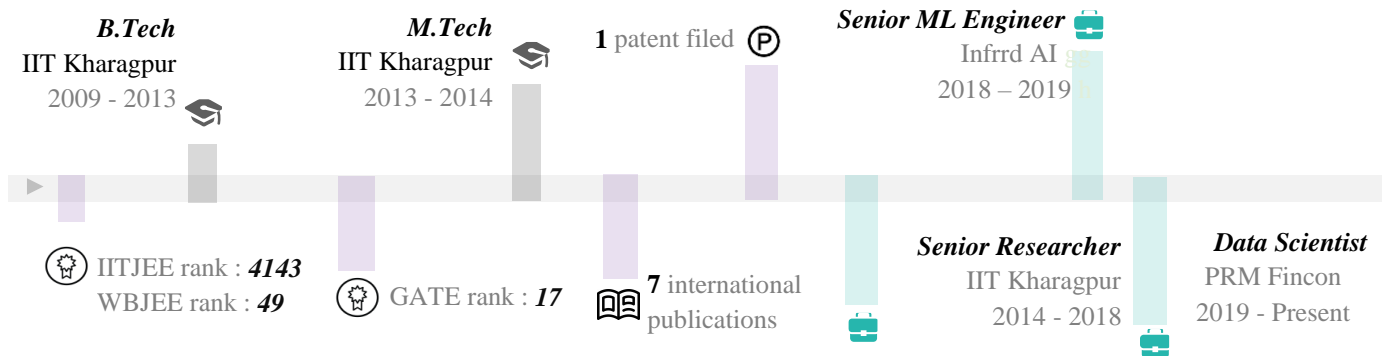
Remote

Highlights

Education

Achievements

Work Experience



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.
- ✓ **EfficientNetV2** 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



Deep Learning



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

years of experience

7

Publications

5

Models in production

76

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)