M THIRULOK SUNDAR

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EDUCATION

Indian Institute of Technology(ISM) Dhanbad *Dec 2021 - Present*
Undergraduate Overall GPA: 8.16/10
Department of Electrical Engineering
Member of CyberLabs - Machine Learning

TECHNICAL STRENGTHS

Computer Languages	Python, C++
Skills & Tools	Machine Learning, Deep learning, Computer Vision, PyTorch, Tensorflow, OpenCV, AWS, Linux, Git, ROS

EXPERIENCE

TEXMiN Dec 2023 - Present
Research Fellow

· Working on training Quadruped robots for mining applications.

Indian Institute of Technology Delhi Oct 2023 - Present
Research Assistant

· Research on novel methods for traffic sign detection under hazardous conditions.
· Working on methods using Attention-Based Convolutional Neural Networks and GANs.

Indian Institute of Technology (ISM) Dhanbad Oct 2023 - Dec 2023
Research Assistant

· Worked on optimizing and improving Few-Shot Graph Neural Networks for classification tasks.
· Procured dataset with different fruit diseases.
· Developed training pipeline and implemented feature extraction methods using various deep learning models.

Mowito Mar 2023 - July 2023
Robotics Software Intern

· Implemented perceptual hashing technique to remove very similar images in training dataset categorised date-time wise to enhance and improve training of the model.
· Implemented a Dataset class which can load and visualize multiple annotations such as instance, picking and crate annotations.
· Implemented a separate annotation loading class to integrate the Dataset class into the existing code-base.
· Implemented a class to calculate time taken for an order to be completed by the robot and human after receiving it given resource and other constraints.

Maxtap Feb 2022 - Apr 2022
Computer Vision Intern

- Implemented a Computer Vision model (from Caffe) to detect moving vehicles in a given video
- Implemented a deep learning model to detect the category of dress worn by people in a video using Tensorflow

Global Cert Pvt. Ltd. Jan 2022 - Feb 2022
Deep learning Internship

- Implemented Perceptron and Convolutional Neural Network models from scratch on given image data for a classification task and Facial Emotion Recognition.

PROJECTS

Implemented a YOLOV3 and YOLOV7 model using Darknet framework to detect traffic lights in a given video in real time.

Implemented an algorithm using traditional computer vision techniques to detect bar-codes in grocery items and predict bounding-boxes of the items in different colours based on whether bar-code is readable, present or not-present.

Implemented basic Machine learning and Deep learning algorithms from scratch without using any libraries in Python.

ACADEMIC ACHIEVEMENTS

Ranked in National Top 0.6% (amongst 1,200,000 candidates) in JEE Mains 2021

Ranked in National Top 3% (amongst 150,000 candidates) in JEE Adv 2021

RELEVANT COURSES

Self-Driving Specialization - University of Toronto(Ongoing)

Machine Learning - Stanford University

Machine Learning with Python - University of Michigan

Deep Learning Specialization - DeepLearning.AI

CS231N (Stanford) - Deep Learning for Computer Vision

Reinforcement Learning - DeepMind x UCL

OTHER ACHIEVEMENTS

Secured second prize in the AI of God - Deep learning/ Computer Vision inter-college Kaggle competition held as a part of the annual tech fest of our college IIT (ISM) Dhanbad.

Won second prize in Winter of Code - Machine learning division held by CyberLabs - official tech club of IIT (ISM) Dhanbad.

Ranked 54th in All-India in Amazon ML Challenge 2023 - We implemented FAISS (search algorithm) to predict dimensions of product

Represented IIT (ISM) Dhanbad in the Inter-IIT Tech meet 2022 - We implemented a NLP model to answer questions given a paragraph.