Jyotika Yadav

Data Scientist | MLE | Computer Vision

jay4jyotika   jyotikayadav   jyotikayadav024@gmail.com   8318720134

EXPERIENCE

CONCERTAI (TERARECON)
DATA SCIENTIST   **Mar 2022 – Present | Bangalore, India**

- ➔ Led the creation of a segmentation based localization model targeting four critical Aorta segments within CT volumes, pivotal to the comprehensive TAVR/EVAR solution package. Currently awaiting FDA approval.
- ➔ Engineered a multiorgan segmentation model, achieving an impressive 92% Dice score, to accurately label 27 distinct organs in full-body 3D CT scans. Successfully deployed in the new Life Sciences platform.
- ➔ Developed proof of concept for identifying CT scans with Pulmonary Embolism, using classification techniques and Grad-CAM
- ➔ Currently engaged in developing a novel approach for data selection optimization, aimed at reducing dataset requirements while maintaining peak performance standards for segmentation models. Using autoencoders and clustering methods, this initiative also aims to expedite the data cleaning and annotation processes.

SIGTUPLE TECHNOLOGIES
AI ENGINEER   **Jun 2021 – Feb 2022 | Bangalore, India**

- ➔ Built an end-to-end ML pipeline for blood smear analyser from legacy code, reducing analysis time by 85%, from 2 minutes to 20 seconds
- ➔ Coordinated the FDA Approval process of the blood smear analyser, by data analysis, system design documentation and priority bug fixing
- ➔ Implemented a WBC detector for Microfluidics blood chambers to provide total counts, differential count with 95% accuracy.
- ➔ Worked with IISc. Bengaluru Professor, Dr. Prathosh A. P., and several pathologists to research for identification of Malarial Parasites in Peripheral Blood Smear

DATA SCIENCE INTERN   **Nov 2020 –May 2021 | Bangalore, India**

- ➔ Identification and classification of different types of Red Blood Cell units from Peripheral Blood Smear slides using a custom CNN model built on Pytorch Lightning and deployed using ONNX Runtime for faster inference.
- ➔ Containerized and deployed using Docker and Kubernetes.

SUPERBOLTER PVT. LTD.
COMPUTER VISION INTERN   **Apr 2020 – Jun 2020 | Remote**

- ➔ Detection of furniture from a room image and finding similar images for the detected furniture using Locality Sensitive Hashing
- ➔ This helps the user to send a picture of a room and find the product of choice from the company catalogue
- ➔ Implemented auto-trainer to train the model automatically with addition of newer data in the catalogue on AWS S3 storage

LOGYANA SOLUTIONS
IMAGE PROCESSING INTERN   **Feb 2020 | Remote**

- ➔ Worked on real-time scanning of document images to extract relevant information from them using Image Processing techniques.
- ➔ Created executable application for the same for Ubuntu and Windows devices

EDUCATION

INDIAN INSTITUTE OF INFORMATION TECHNOLOGY
B.TECH. IN COMPUTER SCIENCE AND ENGINEERING
July 2017 - June 2021 | Kalyani, West Bengal
Cum. GPA: 9.0 / 10

SKILLS

GENERAL INTEREST
Computer Vision • Deep Learning

ML LIBRARIES/FRAMEWORKS
Pytorch • Pytorch Lightning • MONAI • ITK • FastAI • OpenCV • Scikit-Image • Scikit-Learn • Pandas • Keras • Tensorflow • NLTK

LANGUAGES
Python • C • JavaScript • C++ • Bash SQL • CSS • HTML

OTHER TOOLS
Git • Docker • Kubernetes

PROJECTS

- **Virtual Tourist Guide for Government of Goa** | Deep Learning, Computer Vision
- **Correction of annotation affected words in document images** | Image Processing, Natural Language Processing
- **CI/CE Exclusively Built For Machine Learning** | Machine Learning, WebDev
- **AI Powered Wearable To Assist The Visually Impaired** | Machine Learning, Hardware

ACHIEVEMENTS

Judge & Mentor | StatusCode0 Hackathon, 2023
Winner | Smart India Hackathon, 2020
Best Hardware Hack | Hack-A-BIT Hackathon, BIT Mesra, 2018
Founding Member | Free and Open Source Community IIIT Kalyani