Sai Prabhu Reddy Meka

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PROFESSIONAL EXPERIENCE — 4 YEARS

KPIT Technologies — **Bangalore**
Senior Software Engineer — **Oct 2023-Present**
1.Project : AI industrialization.

The Autonomous Vehicle Perception Module project focuses on the development of perception algorithms and systems to enable autonomous vehicles to accurately interpret their surroundings. The perception module serves as the eyes of the autonomous vehicle, integrating data from various sensors such as cameras, LiDAR, and radar to detect and identify objects, predict their behavior, and navigate safely through complex environments.

- Worked on optimizing and quantizing the module using inbuild Software Developement Kit of qualcomm and worked on the postprocessing module for the perception stack.
- Developed robust C++ implementations to seamlessly bridge unsupported ROS message formats onto hardware, ensuring smooth integration and functionality within autonomous vehicle perception modules.

Skills : Python ,Computer vision, C++, Gitlab.

SYNAPSICA HEALTHCARE — **Bangalore**
Software Engineer AI — **SEP 2022-Aug 2023**
2. Project : Spindle

To build an AI system which will detect the abnormalities in the spine and reduce the reporting time for radiologists and generate reports based on the spine diagnosis.

- Worked on binary classi1cation problem to detect vertebral disc using semantic segmentation and achieved IOU of 0.87.
- Worked on the object detection task for detecting facet joints in spine MRI using Yolo and achieved a mAP of 0.89 .
- Enhancing the prediction data pipeline for the spindle project and building a new pipeline for a couple of pathologies and doing some geometrical enhancement for a couple of pathologies to get the predictions accurate.
- Worked on preparing MRI images for ground truth for the data team by aligning diIerent sets of data to annotate in CVAT for providing json for AI models.

Skills : Python,Deep learning,Computer vision,Opencv,AWS,Django,Gitlab.

3. Project : Spindle(product) Dashboard

Developing a comprehensive dashboard for eIectively debugging an AI application spindle, allowing real-time tracking of the execution Row, comparison of outputs, monitoring of CPU utilization, and identi1cation of mispredictions in vertebra annotations made by the AI model.

- Accelerated a dashboard in a team of 3 using the tool python DASH which helps in debugging the main spindle AI backend server.
- Implemented a feature for comparing huge volumes of AI generated json data and Radiologist generated json data feature which eased the work of the AI scientists by implementing a unique feature of json diIerence highlighter.
- Implemented cpu and memory utilization charts which dynamically updates while running the spindle AI backend which helps in knowing the utilization of each backend module.

Skills : Python,Dash,Opencv,Dash,Flask,Gitlab.

HUSYS-A PEOPLE 2.0 COMPANY — **Hyderabad**
Associate Technology — **MAR 2020-Sep 2022**
1. Project : Sales Forecasting and Warehouse Management

To forecast and manage warehouse inventory of goods and commodities so that demand and supply to the mart is in sync so that we can prevent surplus and de1cit conditions,rather than to balance between those.

- A data pipeline has been created for client data procurement.
- Segmented the data into clusters using the K-Means algorithm.
- Build and train the model using various algorithms like XGBoost,Random Forest,SVM.
- Analyzed the Model prediction using the performance metrics like adjustedR2,MSE,MAE.

Skills : Python,Machine Learning,Subversion.

2. Project : Data Reports

Data Reports is an application that fetches EPF, TDS, and Employee Salary Reports, Modules Status Reports, and generates reports by utilizing XML-RPC calls from the HR application Aphusys. It facilitates the seamless uploading of reports to respective government portals and enables comprehensive business analysis.

- Working on generating EPF, TDS, Bank Reports, module status reports by using XML-RPC calls and writing scripts for fetching records from nearly 300 instances and merging it with an app build on django.
- Interacting directly with clients regarding feedback on reports generated, enhancement/modifying the existing code based on the client requirements.

Skills : Python,Django.HTML,Odoo.

3. Project : Insurance Fraud Classification

To Build a Classi1cation Model to determine whether a customer is placing a fraudulent Claim which will save resources to – the organization and will bene1t in cost cutting expense.

- Worked on creating data organization pipeline, segmented the data by creating clusters using K-Means Clustering algorithm.
- Data Preprocessing: Prior to building the classi1cation model, it's important to preprocess the data. This includes handling missing values, handling outliers, and performing feature scaling or normalization as required. You can use techniques like mean imputation, outlier detection algorithms.
- Imbalanced Data Handling: In insurance fraud detection, it's common to encounter imbalanced datasets where fraudulent claims are relatively rare compared to legitimate claims. This can lead to biased models. Apply techniques such as undersampling, oversampling to balance the dataset and improve the model's ability to detect fraud cases accurately.

Skills : Python,Machine Learning.

EDUCATION

SRI CHUNDI RANGANAYAKULU ENGG COLLEGE **Guntur, AP**

- B Tech in Electrical and Electronics Engineering with 72 % (**2014-2018)**

ADDITIONAL INFORMATION

- Technical Skills: Python, Computer Vision, CNN, Deep Learning, Machine Learning, OpenCV , Django, Numpy ,Pytorch, Pandas,NLTK,NLP,LSTM,RNN,Encoder Decoder,Transformers,LLMs.
- Languages:: English, Telugu, Malayalam.
- Tools : WanDB, GIT, Subversion, GITLAB
- Databases: MongoDB