RAAJESH LAGUDUVA RAMESHBABU

ML Dev and ML Ops | multi-Cloud | Team Lead | Accenture | ex-Infosys

Trying to make the world a better place, one line of code at a time.

https://www.linkedin.com/in/raajeshlr

ML Development - https://github.com/raajeshlr?tab=repositories

ML Operations: MLOps - https://github.com/emlopsinfy?tab=repositories

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Mace Surabi, Chennai.

Accenture - 7+ Years

B.E ECE: 86.3 %

SKILLS

Machine Learning Development: Machine Learning, Deep Learning, NLP, Python, RNN, LSTM, TensorFlow, Keras, PyTorch, Image Processing, OpenCV, MongoDB, SQL.

Machine Learning Operations MLOps: DVC, GitHub Actions, Heroku, Docker, Kubernetes, AWS SageMaker, Cloud Formation, BYOM, GCP MLOps, Azure ML, MLflow, Kubeflow, Model Monitoring, Jenkins, Databricks.

INTERESTS: Machine Learning Operations

MLOPS WORK EXPERIENCE — Accenture, July 2021 - Present

- Working as an MLOps Engineer and implementing CI/CD for ML models on AWS. Experienced on creating SageMaker Pipelines, BYOM, Infrastructure as Code using Cloud Formation.
- Worked on creating ML Pipelines using Kubeflow components and deployed it to GCP Vertex AI for various clients.
- Developed model monitoring system and integrated with MLflow, also used MLflow for experiments tracking and model registry, DVC for version control, GitHub actions for automated python testing.
- Used MLflow on Databricks and implemented ML pipeline, model registry, model deployment.
- Worked on containerizing the applications using Docker and deployed it on-premises Virtual Machines, also deployed the docker image on Azure Apps.
- Developed Kubernetes clusters for maintaining Docker containers. Also deployed, exposed, scaled the apps.
- Experience on developing the production ready ML Models and took care of user Authentication by SSO Azure AD, installed SSL certificates on VM for secure https transport, integrated with different systems for ML Pipelines starting from the data ingestion part till the model serving part, created docker containerized 3 tier architectures.

ML DEVELOPMENT WORK EXPERIENCE — Infosys Ltd, Dec 2018 - July 2021

INFOSYS FRAUD DETECTOR

- Developed web app and used Angular (UI), Python on business layer, MongoDB on Data Layer.
- Have used **LSTM + CNN** based ensemble network for identifying fraudulent info in text and numerical data.
- **Deep Learning model + NLP techniques** Spacy, tesseract, bounding box for identifying tampered image.
- Used **Docker** for Deployment, also implemented **Azure AD Single Sign On (SSO) and 3-tier architecture.**

The product is live, and taken care of end to end - Requirement, technically leading, deployment.

COMPREHENSIVE CROSS CHECK FOR NEW JOINERS

- Developed **Python bots** for extracting fields from documents and pdfs, comparing it with SAP DB data.
- Created deployment pipelines of this project in the Virtual machines.

It is for the HR Team and the product is live, it automated the manual cross check work and reduced FTE's.

INFOSYS INTELLIGENT CHATBOT - Understands user screen and provides solution.

- Developed **Microsoft Azure Chatbot** using node.js and used **Python for backend Machine Learning.**
- Used **One-Shot Learning, NLP techniques,** and built with **QnA and RPA Services.**

- Deployed **Python code to Azure as a Docker image.**

INFOSYS INTELLIGENT ASSISTANT – To Automate Support Projects.

- Used **Logistic Regression, Random Forest, Decision trees algorithm** for the text classification.
- Implemented **LDA for clustering for tickets, spacy for NER, text rank for related tickets.**

SIGNATURE CLASSIFICATION USING CNN

- Started this project from scratch, collected the images, labelled it, trained using CNN model.
- Written the python code for cropping, finding the coordinates and completed this small project.

INTERNSHIP EXPERIENCE

https://theschoolof.ai/

Experience on CNNs and NLP using Keras and PyTorch, GAN.

CNN - Image classification and object detection, Landmark's detection, Transfer Learning, super convergence.

NLP - RNN's and LSTM for text classification, Sequence to Sequence models.
CNN Projects in Keras: https://github.com/raajeshlr/EVARepository
NLP Projects in PyTorch: https://github.com/raajeshlr/NLP-END

MLOps: https://github.com/emlopsinfy?tab=repositories

JUNIOR ML ENGINEER WORK EXPERIENCE — TCS, Dec 2014 – Nov 2018

HOME CREDIT DEFAULT RISK

- Our goal is to predict loan defaulters using Logistic Regression, Random Forest, and LightGBM model.
- Performed EDA, preprocessing done, tried feature engineering, and evaluated with ROC AUC.

FINDING DONORS FOR CHARITY

- Our goal is to predict individuals makes money > $50,000 to appeal donor for a non-profit organization.
- Performed EDA, pre-processing including skewed continuous feature transformation, normalization, encoding.
- Performed Grid Search CV and fine-tuned essential parameters for GBM, which achieved a prediction accuracy of 87%.

DENSELY CONNECTED CONVOLUTIONAL NETWORKS – DENSENET

CIFAR10 DATASET: DENSE-NET PAPER https://arxiv.org/pdf/1608.06993.pdf

- Created Dense-Net architecture with three convolution blocks and two Transition blocks.
- Achieved the max validation accuracy of 88% after fine-tuning and implementing OneCycleLR.

CREATING CUSTOMER SEGMENTS

- Developed Unsupervised Learning, clustering technique, demonstrated feature scaling, dimensionality reduction and feature transformation using PCA, and identity customer segments hidden in the data.
- Developed K-Means clustering algorithm and GMM and measured performance with Silhouette score.

CONVOLUTIONAL NEURAL NETWORKS USING FASHION MNIST DATA- NO OBSELTE METHOD

- Goal is to achieve 99.2% Val Accuracy with less than 20,000 Hyper-parameters (No Hidden layers should be used).
- Developed the model with a high-level framework Keras, with selection of TensorFlow for backend.
- The model achieved 99.2% Validation accuracy in 11 Epochs.

RESTAURANT REVIEW MANAGEMENT SYSTEM

- Goal is to classify reviews, performed cleaning, stemming, created corpus and bag of words with 2000 features.
- Implemented Gaussian Naïve Bayes Classifier, and trained and tested the model, evaluated using f1_score.

CERTIFICATES

ML Nanodegree - Udacity, Sequence Models - Coursera, Machine Learning - Coursera, Machine Learning A-Z - Udemy.

HONOR AWARDS

Impact creator award from Infosys.
Best Performer of the year award from TCS.
Service and commitment award from TCS.

LANGUAGES: Sourashtra, English, Tamil, RW Hindi, Learning Kannada.

ACHIEVEMENTS

- Secured 'Certificate A' Exam under authority of, Ministry of Defense, Government of India.
- Completed Hindi Exams until Praveshika.
- Presented Parallel Parking robots and image processing surveillance system papers during college.