Geo Johns Antony

OBJECTIVE

Looking for an amazing opportunity to work on multiple domains of ML life cycle. I believe in continuous learning, which keeps me up to date in the tech related to my domain. I always try to grasp the idea or requirement fast and transform these use cases into various feasible real world solutions. I am looking to apply my existing knowledge and experience with new experiences to widen my knowledge along with expanding the company's growth. Always interested in working on cutting Edge tech.

SKILLS

Programming Languages: Python, R, Bash, C++, C, CMAKE, MAKE, YAML

Frameworks: Kubernetes, Kubeflow, Istio, Docker, Hadoop, Spark, Hive

Tools: Jenkins, Argo, GitLab Runner, GitHub Actions

Cloud Solutions: Azure cloud, Google Cloud platform, Amazon Cloud

Server: Linux Servers (Ubuntu, CentOS), Reverse Proxies, Load Balancers

Databases: MongoDB, MySQL, MariaDB, Redis, MinIO

EDUCATION

Degree	Specialization	Year	Institution	Board	Score (CGPA)
AISSE		2012	Mar Thoma Public School	CBSE	8.6
AISSCE	Science & Maths	2014	Bhavans Varuna Vidyalaya	CBSE	7.9
B Tech	Computer Science and Engineering	2018	Christ Faculty of Engineering	Christ University	7.5
M Tech	Big Data Analytics	2020	Vellore Institute of Technology	Vellore Institute of Technology	8.7

EXPERIENCE

MLOPS (INTERN), RELIANCE INDUSTRIES LTD (June '19 – May '20**)**

Reliance Industries Limited is an Indian multinational conglomerate. I was reporting directly to the Associate Senior Vice President, under whom I was responsible for developing a platform to transform Data Science and Machine Learning models into real world production ready applications. I was a Machine Learning Operations (MLOPS) Engineer working on Cloud native solutions. Kubernetes was the main essence of this entire platform. It provided a concrete management solution for container orchestration. Machine Learning models varied from Classification, Regression up to video analytics. This platform provided an environment for Data scientists to automate the entire life cycle of their Data Science application. These models consumed high amount data. Due to this high consumption, a distributed storage and processing solution was required. Hadoop provided an amazing solution for this problem. For high streaming of data, Apache Spark was used as an analytics Engine. These various open sourced tools were integrated over the network with multiple scripts and tools and was able to create a stable platform for easy CI/ CD management for Data scientist, with production API deployments.

MLOPS ENGINEER, AIVIDTECHVISION (September ’20 – Present**)**
Aividtechvision is a startup focusing on creating a Video Analytics platform as a service. They use various Deep Learning Frameworks and OpenCV. It is a small team. I work directly under the CEO, transforming business use cases into real world applications. I am involved in designing and creating scalable MLOPS cloud native platform for Video Analytics. Video Analytics platform involves live and recorded video use cases. It requires a platform which can handle a huge amount of processing. A containerized solution can provide better performance with making less resource wastage of a virtual environment. Along with containerization, orchestration is necessary, for which Kubernetes solutions are implemented. This platform requires a fast, lightweight messaging protocol for handling data transmission for edge devices such as cameras and sensors. For this problem MQTT messaging protocol solution is implemented. Multiple Customers with various solutions on various cloud platforms must be implemented. For handling this complex network of Customer platforms Anthos from Google cloud is being implemented. It gives a great solution for handling multiple Kubernetes clusters both managed and unmanaged over various cloud providers.

TECHNICAL EXPERIENCES

DATA SCIENCE USE CASES:

Experience with providing MLOPS solutions for Various Data Science use cases including Machine Learning, Deep leaning and Video Analytics Models. Models included Live streaming, data handling and processing and model serving. Designed and deployed solutions from creating a model development containerized environment till Model serving and consumption as an API and integrating API gateway solutions for security and observability of the model application.

CLOUD CENTRIC SOLUTIONS:

My work is highly focused on Cloud Centric Solutions. It has both Managed and unmanaged solutions. In managed solutions I have industrial experience with Google cloud Platform and Azure Cloud Services. I also have experience with AWS from hackathons and projects. In Managed services I have experience with various services from workload processing, Data handling and processing and solutions deployments. Under Unmanaged Services, I have experience with handling On Premise private cloud solutions. I have worked on multiple solutions same as Cloud solutions here. This solution provide more secure data handling compared to managed services. Data centric and edge centric solutions were implemented for various applications.

MLOPS:

MLOPS platforms provide an End to End application management for data science solutions. It requires integration of various data handling and processing analytical engines with scalable processing and deployment platforms. With containers being an efficient and effective platform for all processing, Kubernetes provides a major backbone for MLOPS platforms. There is a lot of data handling and processing involved with practical data science models. Distributed data handling and processing can provide a huge advantage and effective use of resources. Hadoop provides a good distributed Map reduce Architecture for Data handling and processing. An integration of

distributed data handling with Hadoop and distributed container processing orchestrator Kubernetes can provide an effective platform

KUBEFLOW:

Kubeflow is an AI ML Ops tool which provides a good framework for training a Data science model. Kubeflow provides a framework with Kale for training models with orchestrating each containers as individual stages in an ML model life cycle. It also provides a great feature for hyper parameter tuning with Katib tool integration. Kubeflow provides multiple features for API deployments as well. Kubeflow becomes a major contributor for MLOps platform with these features.

MODEL SERVE:

Various Models requires different Model serving mechanisms. I have worked on exposing models with Seldon, TFServing, PyTorchServe and Flask. Each serving models have unique feature required with respect to the model built. Automated services were integrated in the MLOPS platform for easy exposing for various models.

HADOOP:

Distributed data handling and processing creates an faster and effective solution for the MLOPS data section. Due to the distributed nature, Hadoop provides an effective use of resources. The Master Worker Architecture provides a highly distributed system. Map Reduce model provide parallel processing of big data sets. Hadoop platform gave an added advantage for parallel processing and effective resource utilization.

KUBERNETES:

Kubernetes is a container orchestration framework which was primarily used to in the MLOPS container solutions. I have worked on both managed and unmanaged Kubernetes solutions. I have implemented various containerized solutions for application deployments, database storages, application processing and backend processing. Kubernetes Custom resources created flexible solutions for application which were created application integration and processing.

ANTHOS:

Anthos platform provides mechanism for handling various Kubernetes clusters. This solution was used to monitor various clusters and services. A service level monitoring system with Istio was setup with the help of Anthos. Easy application deployment with Git management solution was integrated with Anthos. It is extremely useful when handling multiple managed or unmanaged Kubernetes platforms.

AWARDS & HONOURS

Received Star award for outstanding performance in MLOPS platform creation and model execution from Reliance.

PERSONAL DETAILS

Date of Birth:	20/09/1996
Gender:	Male
Languages Known:	English, Hindi, Malayalam, Tamil
Native:	Kochi, Kerala, India
Passport:	Yes
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