Medamallela Sethu Sai

Data Scientist

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○ https://github.com/sethusaim

SKILLS

Programming Language (Python) ● **Databases** (MongoDB) ● **RestAPI** (FastAPI, Flask) ● **Linux** (Ubuntu)

Machine Learning (Scikit-learn, Regression, Classification) ● **Deep Learning** (PyTorch) ● **Cloud** (AWS, Azure)

MLOps (KubeFlow, MLFlow, Kubernetes, Docker, Prometheus, Grafana, BentoML, Tekton, ArgoCD, GitHub Actions, CircleCI, Jenkins, Terraform)

Natural Language Processing (RNN, GRU)

WORK EXPERIENCE

iNeuron.ai
Data Scientist
08/2022 – present
Bengaluru, India
- Introduced and implemented **KubeFlow pipelines** on **AWS EKS** cluster for internal projects also worked on **CI-CD** for the same
- I have introduced and implemented **MLOps methodology** for the first time in the organization using **MLFlow**, and **GitHub Actions**.
- I have also introduced and implemented **BentoML** serving as part of MLOps practice and implemented a **Continuous Training** pipeline for the **retraining** of models. Also managing the internal platform infrastructure using Terraform

PROJECTS

Network Security using Machine Learning ⚲
MLOps Project
11/2022 – 01/2023
Tech - Python, Machine Learning, BentoML, GitHub Actions, Terraform, and AWS
- Worked on improvising the existing machine learning project to integrate **continuous training** and **model serving** as part of **MLOps level 1** architecture
- Worked on integrating and setting up **MLFlow** on **AWS Fargate** for our data scientists to track their experiments and for model versioning.
- Worked on implementing **BentoML** for model serving using **AWS App Runner**
- Manage the project infrastructure using **Terraform**

Pipeline Standardization
iNeuron Internals
08/2022 – present
- Worked on building a platform on top of **KubeFlow** for our data scientists and machine learning engineers can run their experiments seamlessly on **AWS Elastic Kubernetes cluster**.
- Worked on integrating **BentoML** for model serving as a part of platform building, where data scientists can serve their models for both internal and external projects
- Worked on setting up the internal platform infrastructure using **Terraform**.

Reverse Search Engine ⚲
Image Embeddings
09/2022 – present
Tech - Python, Resnet18, PyTorch, AWS,MongoDB, Paperspace
- Assisted with designing a **decoupled microservice architecture** for an **embedding-based image search engine** which includes **CI-CD** for data collection, model training pipeline, and model prediction
- Used **AWS S3** bucket as a data source for listing images after model prediction endpoint. Selected **Resnet18** as embedding generators and **Annoy algorithm** for finding nearest neighbors in **log n time complexity**
- Implemented **on-demand continuous training pipeline** for **GPU Training**

HACKATHONS

Decoupled Machine Learning System
Hackathon Challenge
06/2022 – 08/2022
Remote, India
Tech - Machine Learning, Kubernetes, MLFlow, Ansible, Terraform, Jenkins, Tekton Pipelines, ArgoCD, Prometheus, Grafana

Problem Statement: Design a decoupled machine learning system in which all the machine learning components have to be independently run without depending on each other

Solution Build -
- Built a system that runs on an **EKS** cluster leveraging **Tekton Pipelines** for orchestration and **Jenkins** for CI-CD along with **MLFlow** for experiment tracking and model productionazation
- Leveraged **GitOps** principles for auto-deployment of ML component manifests using **ArgoCD, and Terraform** for provisioning infrastructure,**Ansible** for configuration management and **Prometheus** and **Grafana** for monitoring.

EDUCATION

B.E Mechanical Engineering
Don Bosco Institute of Technology
08/2017 – 09/2021
Bangalore, India