Team No:19SOCUG214

SYNOPSIS

DISTRIBUTED ANALYTICS IN FOG COMPUTING PLATFORMS USING TENSORFLOW AND KUBERNETES

KEY WORDS: Edge Analytics , Docker , Kubernetes , Tensorflow , YOLO , Containerisation , Orchestration, OpenFaaS.

In this project an edge analytics platform which is capable of handling the streaming data for analytics is setup to analyse the facial data. The platform is created using Docker and Kubernetes along with Tensorflow. Docker is used as a containerisation tool and the Docker hub is used as a remote repository for pulling and pushing the code to build the Docker images.

These docker images are build for Tensorflow application which has the computational libraries for python. The Tensorflow application is hosted on the Kubernetes cluster which captures the data from the worker node and does classification and localisation of the data captured.

In this project my contribution includes creation of the edge platform using the configuration files and yaml files for services and deployments. I have written linux scripts and used command line tools (CLI) for deploying OpenFaaS on to the cluster. I made use of nginx and inlets TNS tools to port forward the applications in the cluster to the outside environment.

After the completion of this project, I'm able to solve the various open issues in github related to the configuration settings and SSH communication issues of the cluster and capable of deploying an application on to the cluster from the scratch.

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