FINE TUNE & EVALUATE LLMS WITH AMAZON SAGEMAKER REPORT

SUBMITTED BY-

NAME : ISHITA MUKHERJEE

ROLL NO : 2105967

CLASS: CSE 28

SUBJECT : CLOUD COMPUTING

TOPIC : AWS ASSIGNMENT

INTRODUCTION-

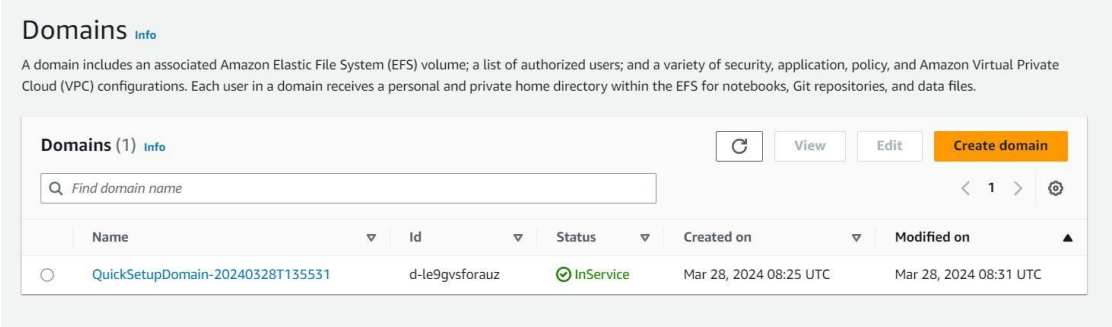
In the contemporary era where data is the new oil, Natural Language Processing (NLP) has emerged as a pivotal domain that empowers machines to understand and generate human language efficiently. Within this sphere, the role of Language Models (LMs) in various applications such as text generation, sentiment analysis, and translation is indispensable. This report provides an in-depth exploration of the deployment and training of the Llama-7b Language Model (LLM) using Amazon SageMaker, specifically in the Sydney region.

The Llama-7b model, a product of Meta (previously known as Facebook), is a state-of-the-art advancement in language comprehension, capable of processing and generating text with remarkable fluency and coherence. The deployment of such a sophisticated model necessitates meticulous attention to infrastructure, scalability, and performance optimization, all of which are effortlessly handled by Amazon SageMaker, a robust machine learning platform.

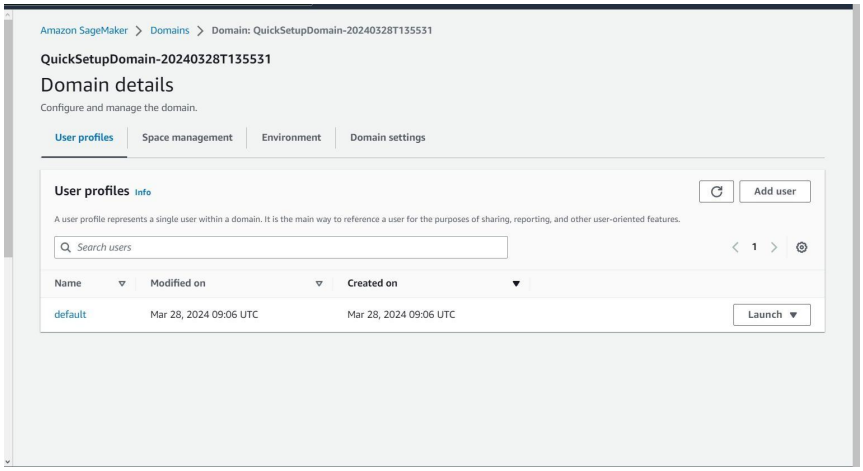
This report offers a comprehensive overview of the deployment process, encompassing model setup, data preprocessing, training configuration, and endpoint deployment. Furthermore, it delves into the practical implications and potential applications of the Llama-7b model, underscoring its importance in augmenting natural language understanding across a variety of domains.

WORKING-

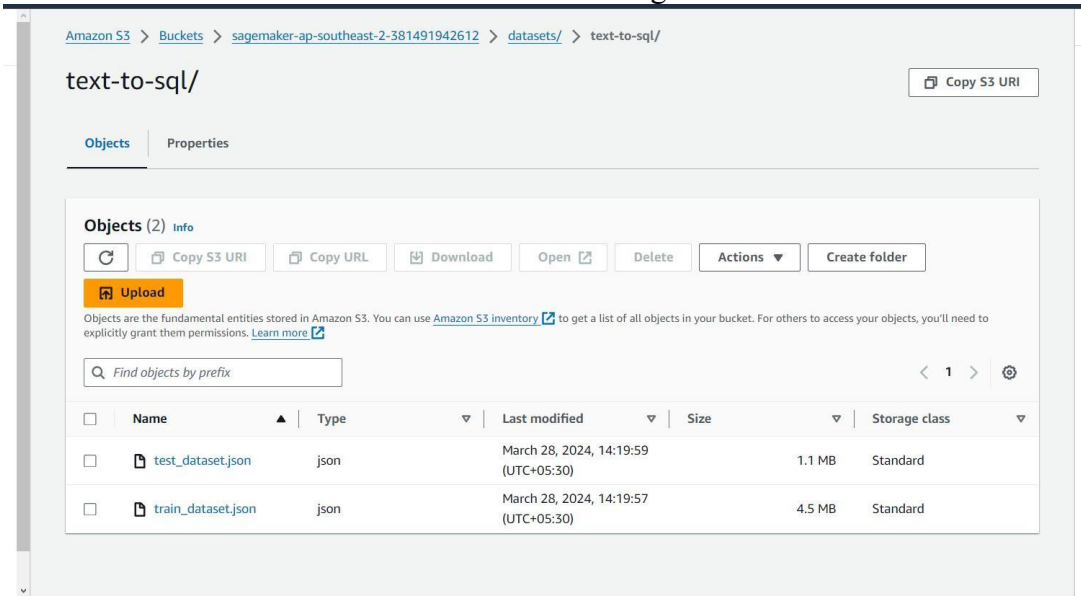
1. We create a SageMaker Domain in our AWS Account



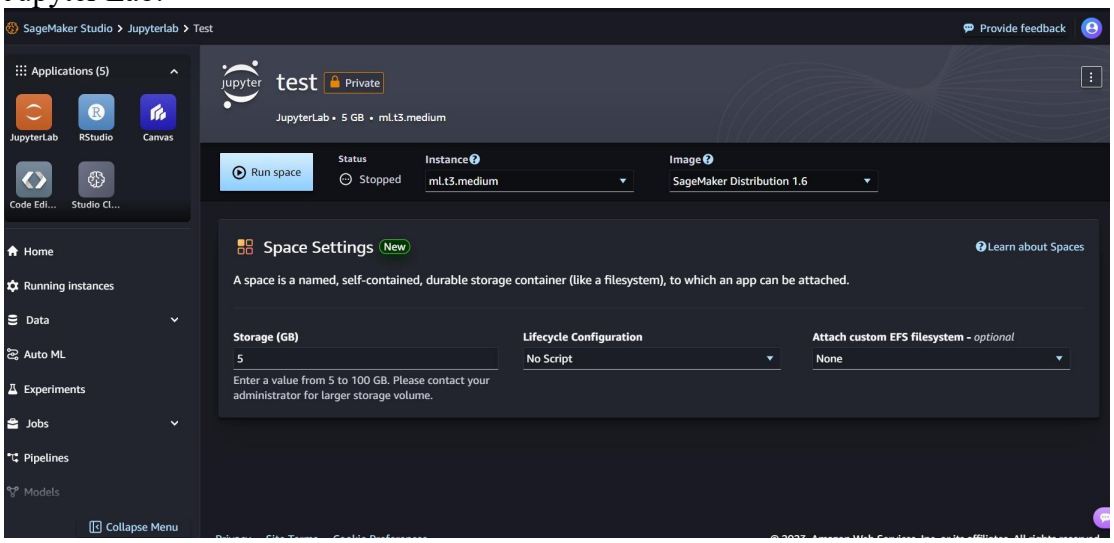
2. We create a User Within that Domain



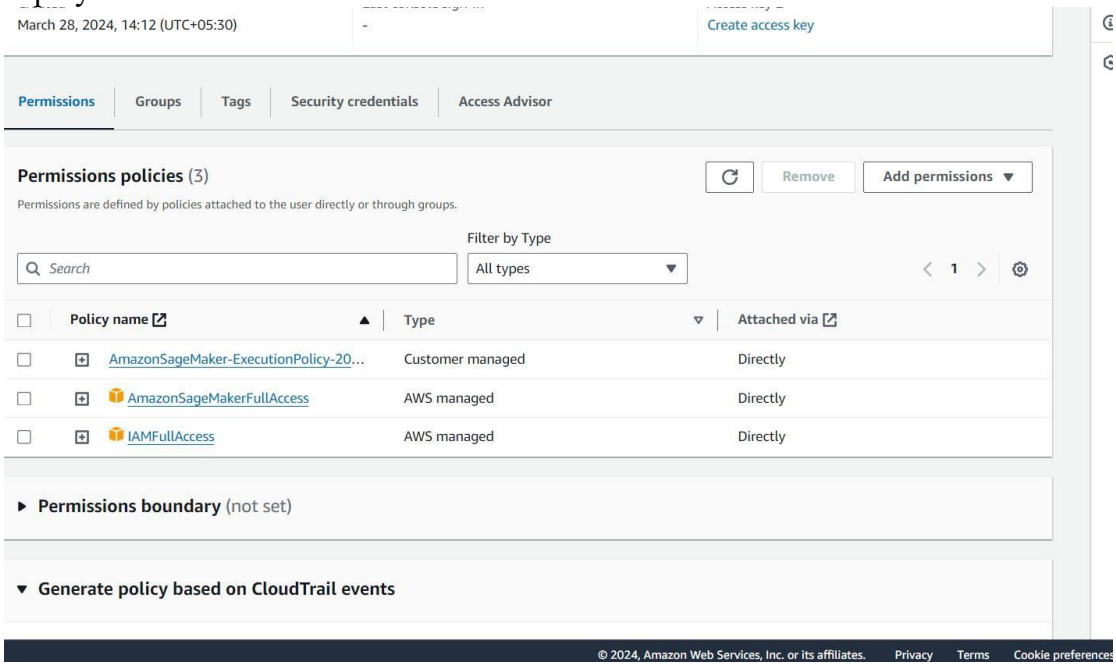
3. We Create an AWS S3 Bucket in the relevant region to store the dataset.



4. We deploy our model through the given code via SageMaker Studio's Jupyter Lab.



5. We create a another User with SageMaker access to test/predict from the deployed model.



CONCLUSION-

To sum up, the successful deployment and training of the Llama-7b Language Model using Amazon SageMaker in the Sydney region represent a notable milestone in harnessing advanced NLP technologies for real-world applications. Through careful configuration and optimization, we have effectively incorporated the Llama-7b model into the SageMaker framework, facilitating effortless scalability and high-performance inference capabilities.

This endeavor has not only showcased the power and flexibility of SageMaker but also highlighted the potential for future progress in NLP research and development. As we look to the future, the ongoing refinement and exploration of language models like Llama-7b offer the potential for more breakthroughs in natural language understanding. This will ultimately revolutionize human-machine interactions and pave the way for transformative innovations in AI-driven applications globally.

Name : Ishita Mukherjee
Roll No: 2105967
Section : CSE 28