UDACITY

Introducing Generative AI with AWS

Project: Building a Domain Expert Model

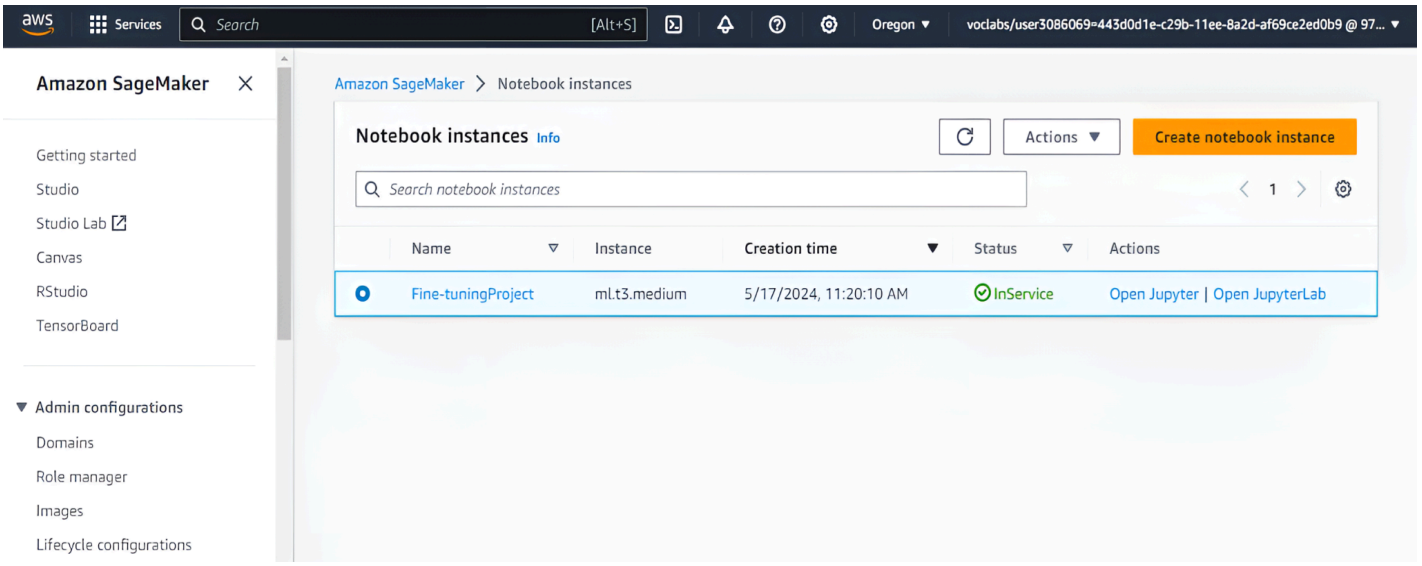
Environment and Project Setup

Configured and completed the below steps and used Aws US West Oregon (us-west-2) Region.

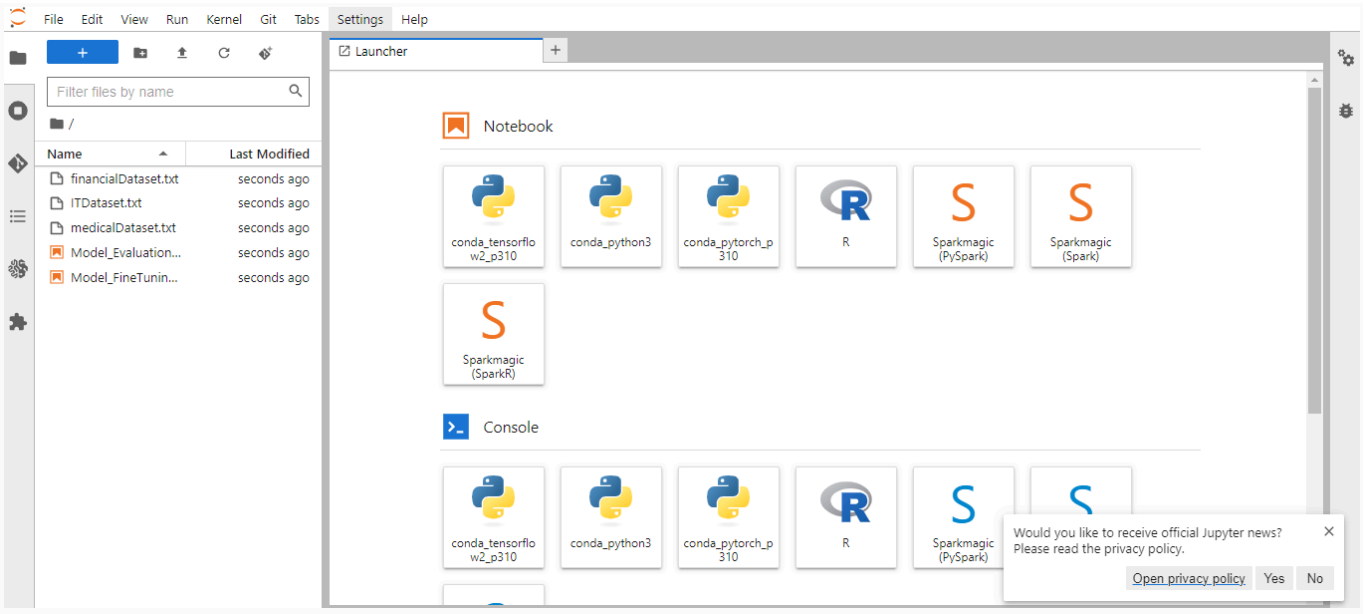
- An AWS SageMaker IAM Role
- An AWS SageMaker Notebook Instance
- A GPU instance for fine-tuning training
- Downloaded the **project starter files**.

Step 1: Upload Project Starter Files

- **Creating and Running the Fine-tuningProject Instance**



- **Uploading the Python notebook files (.ipynb)**

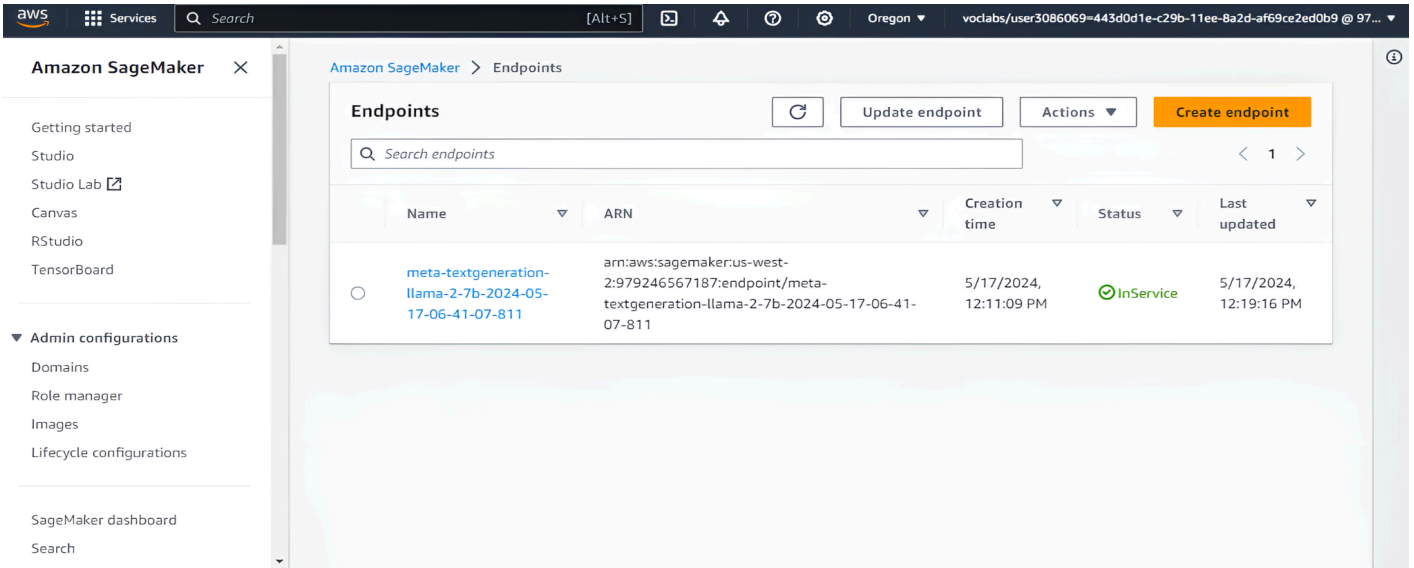


Step 2: Choose your Dataset

I have opted for a dataset within the domain of **information technology (IT)**.

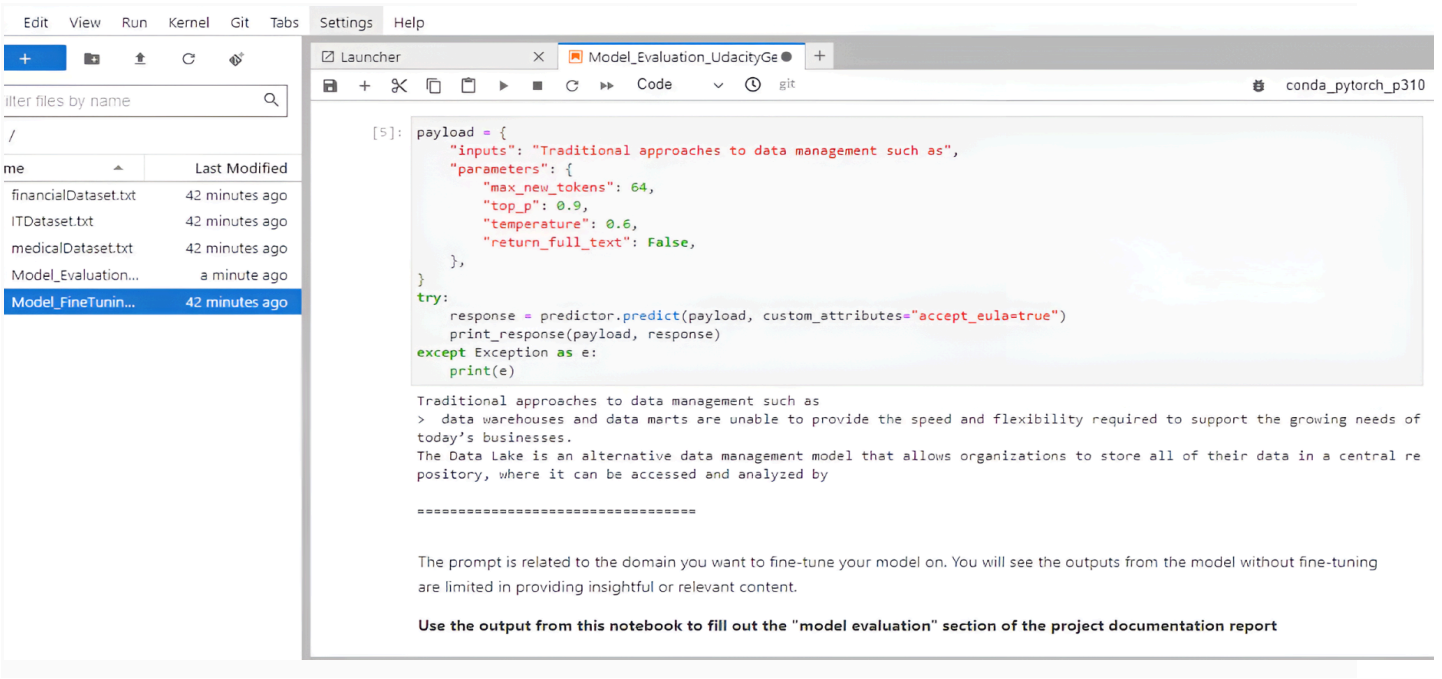
Step 3: Deploy and Evaluate the model (Model_Evaluation.ipynb)

- Completed and ran the cells in the Model_Evaluation.ipynb file
- Screenshot of the Model Deployment of Model_Evaluation.ipynb

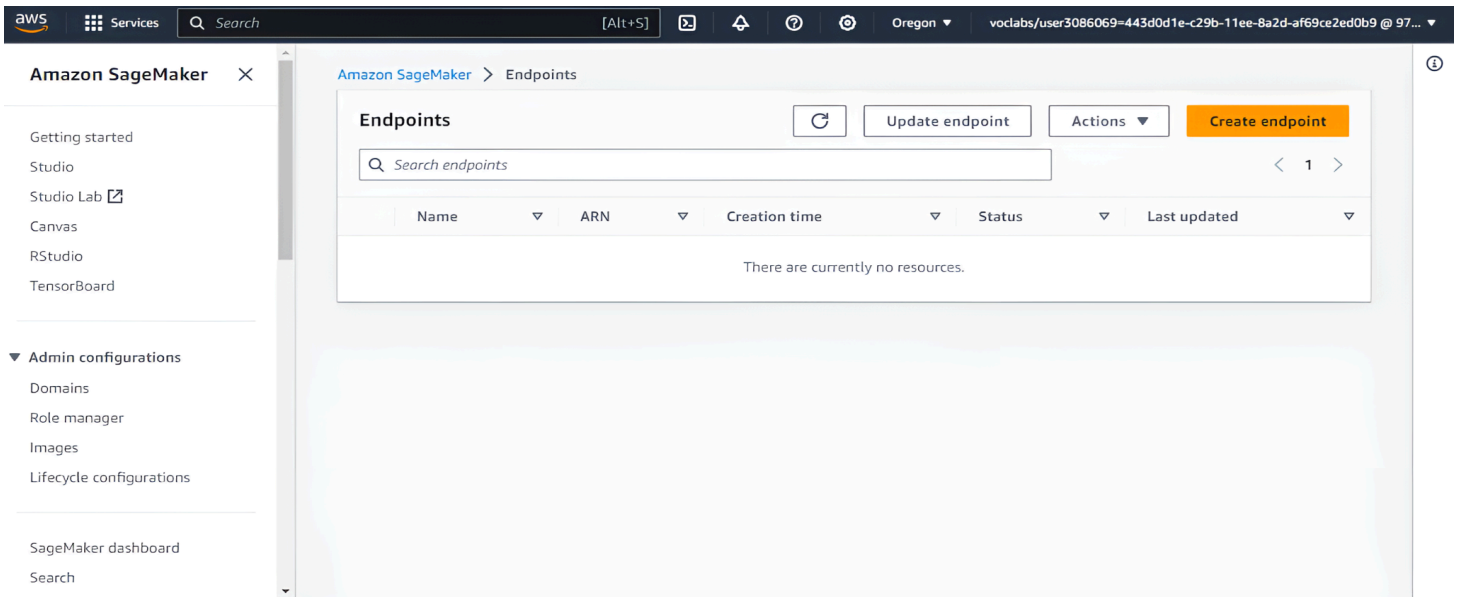


- Saved and download Model_Evaluation.ipynb with the cell output,uploaded in the zip file and file name is ***Model_Evaluation_UdacityGenAIAWS.ipynb***

- Screenshot of the Model_Evaluation.ipynb file with the cell output as proof



- Screenshot of Deleted the Model Deployment and endpoints



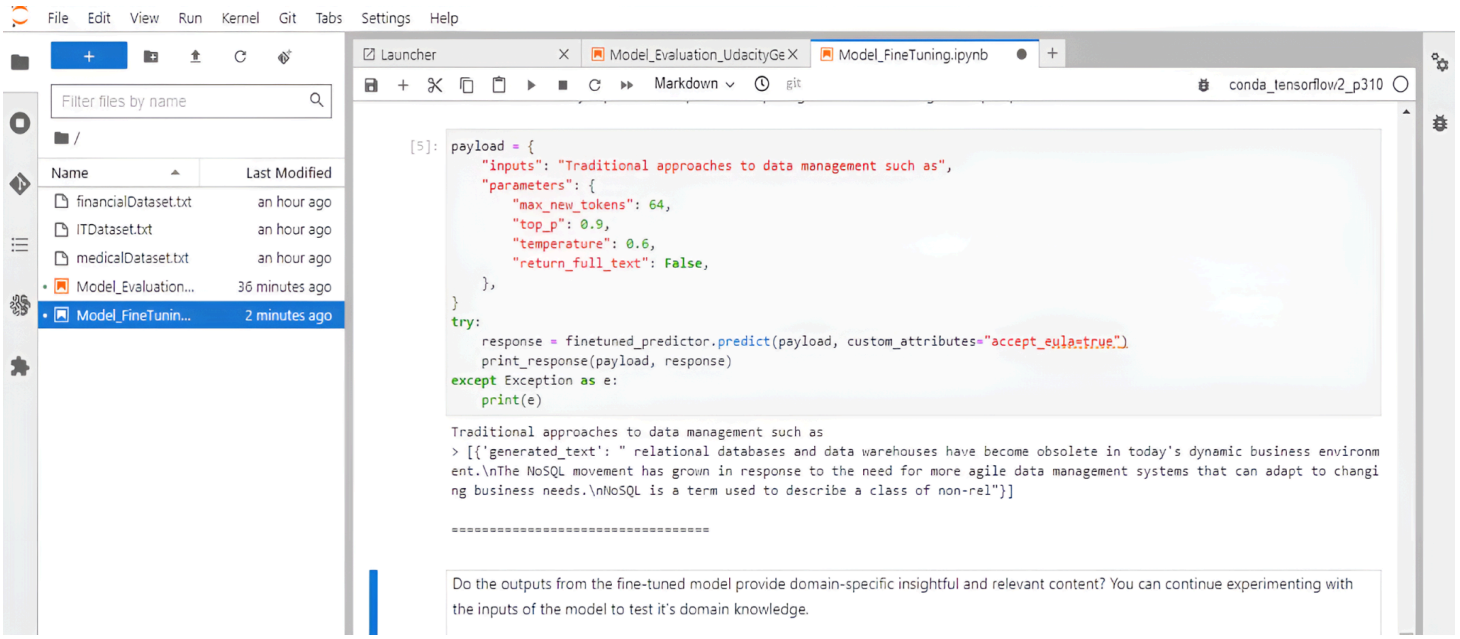
- Updated the Project Documentation section about the evaluation of the model's text generation capabilities and knowledge.

Step 4: Fine-tune the Model (Model_FineTuning.ipynb)

- Completed and ran the cells in the Model_FineTuning.ipynb

- Saved and download Model_Evaluation.ipynb with the cell output,uploaded in the zip file and file name is ***Model_FineTuning.ipynb***

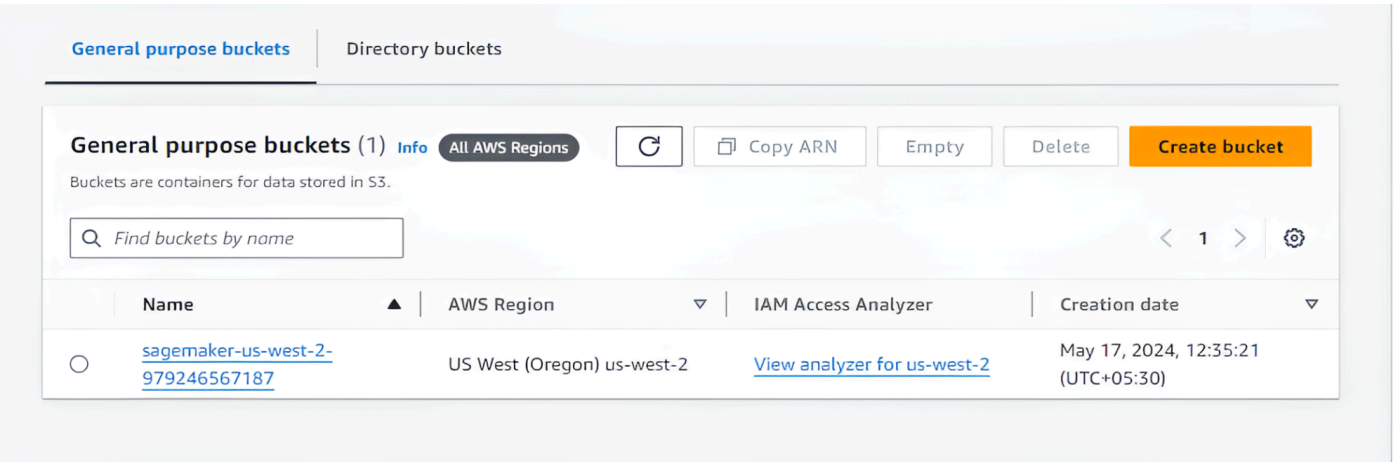
- screenshot of the Model_FineTuning.ipynb file with the cell output as proof



- Updated the Project Documentation Report section about fine-tuning the model

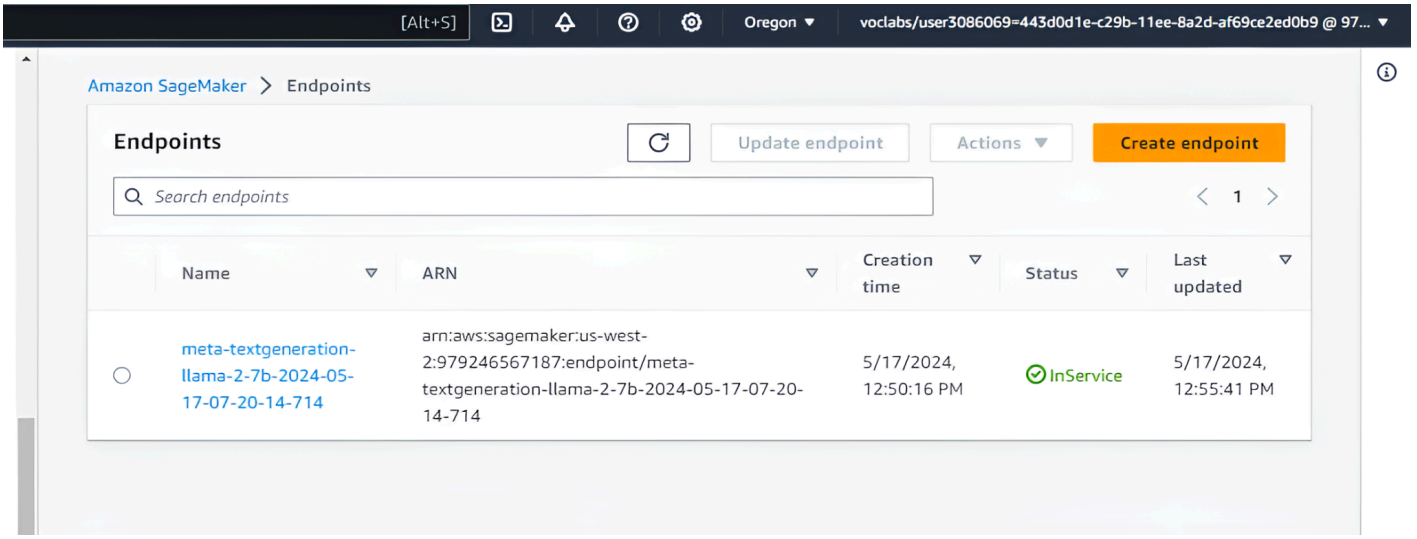
Step 5: Deploy and Evaluate the Fine-tuned Model

- Screenshot of Visiting the AWS S3 bucket where my fine-tuned model weights are stored after training for your submission.

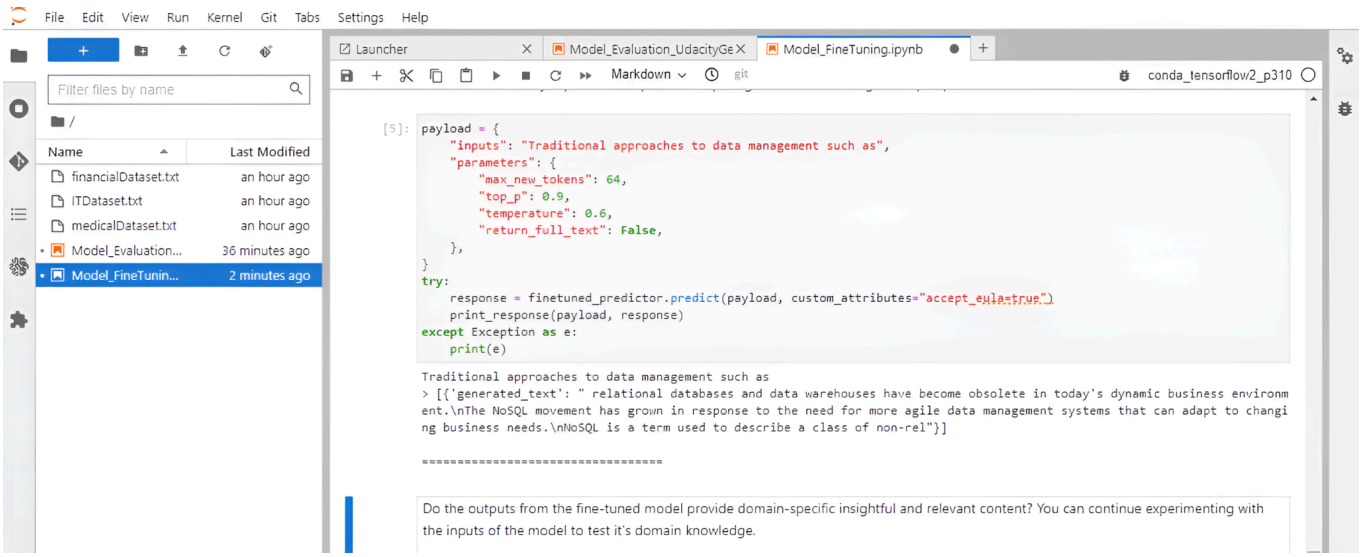


ARN - arn:aws:s3:::sagemaker-us-west-2-979246567187

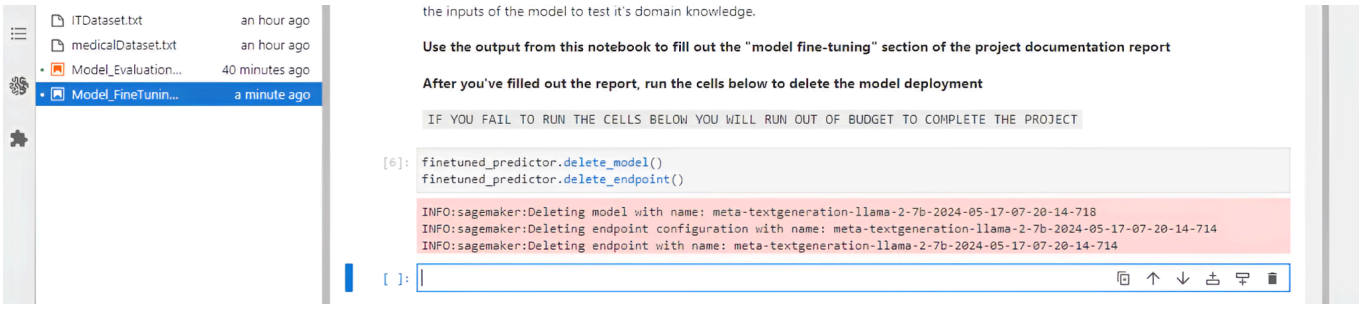
- Screenshot of Model_FineTuning.ipynb file about deploying and evaluating the fine-tuned model.



- Screenshot of the Model_FineTuning.ipynb file with the cell output as proof



- Screenshot of Deleted the Model Deployment and endpoints(Cell Output)



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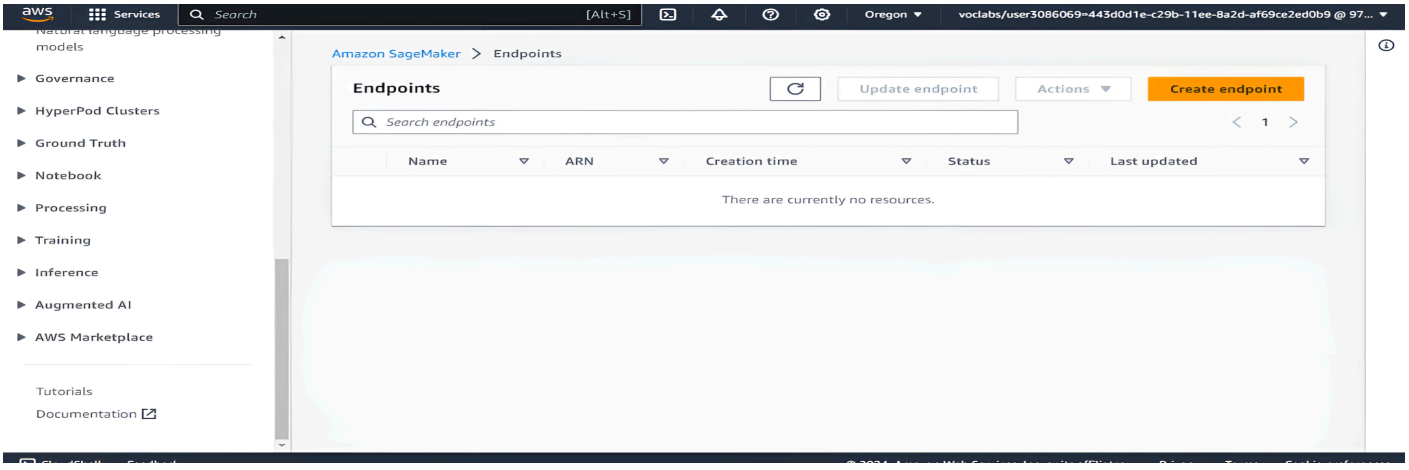

- Updated the Project Documentation Report section about fine-tuning the model.

Step 6: Collect Project Documentation and Submit

Zip File Named Project_Building_a_Domain_Expert_Model.zip is uploaded and consists of

- Model_evaluation.ipynb with cell output (File_Name:-Model_evaluation.ipynb).

- Model_FineTuning.ipynb with cell output (File_Name:-Model_FineTuning.ipynb).

- Screenshots of both notebooks with cell output.

- The completed Project Documentation Report (File_Name:- UDACITY Introduction to Generative AI with AWS Project Documentation Report).
- Snapshots folder consists of both the notebooks with outputs for better visibility.