**Lab 2 - Fine-tune a generative AI model for dialogue summarization**

In this notebook, you will fine-tune an existing LLM from Hugging Face for enhanced dialogue summarization. You will use the FLAN-T5 model, which provides a high quality instruction tuned model and can summarize text out of the box. To improve the inferences, you will explore a full fine-tuning approach and evaluate the results with ROUGE metrics. Then you will perform PEFT fine-tuning, evaluate the resulting model and see that the benefits of PEFT outweigh the slightly-lower performance metrics.

**Setup the lab**

*Notes*:

* For the lab, it is better to use a laptop or desktop computer instead of a tablet.
* The lab uses Amazon Web Services (AWS) which take some time to spin up. You may need to wait a few minutes for the lab to open.

1. Go to **Amazon SageMaker**.

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1. Click on **Studio** and then **Open Studio**.

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1. Click on **Launch** -> **Studio**. You may need to wait for a few moments and then hit a refresh button to see the **Launch** button.

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1. Wait a few moments...

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...welcome to SageMaker Studio. Click on **Open Launcher**.

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*Note:* If you do not see the SageMaker Studio screen shown above, you may need to disable pop up blockers and/or VPN.

1. Open System terminal.

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1. Use the following command (you can copy and paste it) in the System terminal to download the lab:

**aws s3 cp --recursive s3://dlai-generative-ai/labs/w2-170864/ ./**

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1. Click on the folder icon on the left to find the downloaded notebook:

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*Note:* You might need to update the environment to see the downloaded notebook.

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1. Open Lab\_2\_fine\_tune\_generative\_ai\_model.ipynb notebook (if you need to set the kernel, please choose "Python 3 (Data Science 3.0)" with instance type ml.m5.2xlarge).

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## **Lab content: Fine-Tune a Generative AI Model for Dialogue Summarization.**

1. Follow the lab instructions in the Lab\_2\_fine\_tune\_generative\_ai\_model.ipynb notebook.

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**Finish the lab**

1. If you wish to download the notebook, right-click on the notebook file in the File Browser, then select **Download**. Or in the main menu, choose **File**, then **Download**.

*Note:* If you were running the lab in your own AWS account, please shutdown the SageMaker Studio instance.

1. Close all the windows of the AWS Management Console.
2. Click on Submit button to complete the lab. If you want to verify whether the lab is successfully completed, click on Grades button.

*Note:* The AWS account, which was created for the lab, **expires within 2 hours**. During this period you can close all of the console windows and come back to your work later. After the expiration the current AWS account will go through a cleanup procedure (which will take up to 25 minutes), then the access to the new account will take longer (up to 20 minutes) and your previous work will not be saved. **To save the notebook locally** before the expiration you can download the notebook from the Amazon SageMaker Studio (right click on the notebook -> “Download” command).