

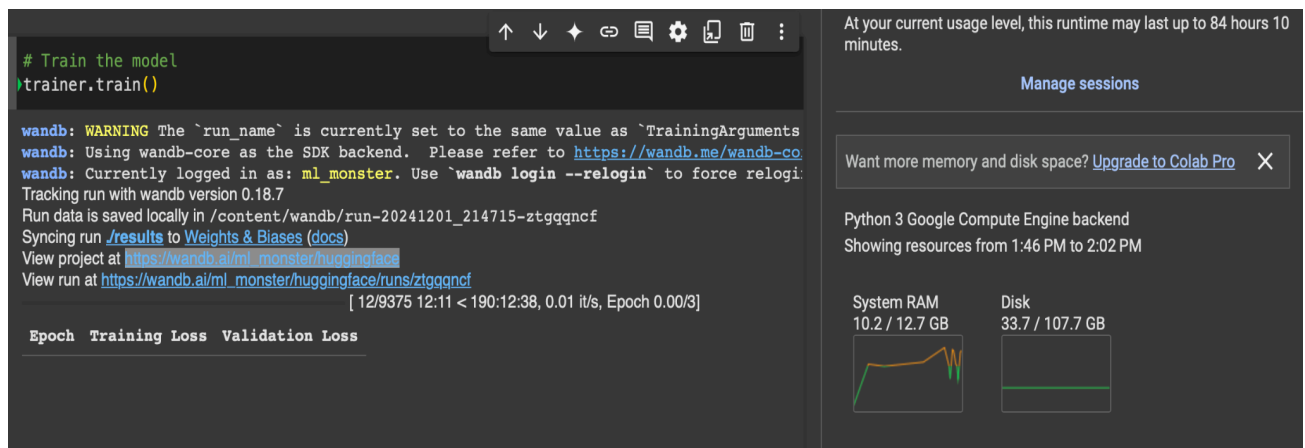
Project Milestone

Goals Defined for the Milestone:

- Select a publicly available dataset and preprocess it for sentiment analysis.
- Train a Transformer model on the data.
- Achieve a baseline accuracy of 70% on the test dataset.
- Implement a working script for dataset loading, preprocessing, and model evaluation.

Challenges blocked the Progress:

- Training speed: The initial Transformer model (BERT) was too slow, taking over 7 hours. This was resolved by switching to the DistilBERT model.
- Limited compute resources: Training on larger datasets is challenging with the available hardware.



The screenshot shows a Google Colab notebook environment. The left pane contains a code cell with the following content:

```
# Train the model
trainer.train()
```

Below the code cell, the output shows WandB logs:

```
wandb: WARNING The `run_name` is currently set to the same value as `TrainingArguments
wandb: Using wandb-core as the SDK backend. Please refer to https://wandb.me/wandb-co
wandb: Currently logged in as: ml_monster. Use `wandb login --relogin` to force relogi
Tracking run with wandb version 0.18.7
Run data is saved locally in /content/wandb/run-20241201_214715-ztgqgncf
Syncing run ./results to Weights & Biases (docs)
View project at https://wandb.ai/ml_monster/huggingface
View run at https://wandb.ai/ml_monster/huggingface/runs/ztgqgncf
[ 12/9375 12:11 < 190:12:38, 0.01 it/s, Epoch 0.00/3]
```

Below the logs is a table header:

Epoch	Training Loss	Validation Loss
-------	---------------	-----------------

The right pane shows the Colab interface with a warning: "At your current usage level, this runtime may last up to 84 hours 10 minutes." Below this is a "Manage sessions" button and a notification: "Want more memory and disk space? Upgrade to Colab Pro". The backend is "Python 3 Google Compute Engine backend" showing resources from 1:46 PM to 2:02 PM. Resource usage is shown as:

System RAM	Disk
10.2 / 12.7 GB	33.7 / 107.7 GB

Below the resource usage are two small line graphs: one for System RAM and one for Disk usage.

Next Steps:

- Tune hyperparameters to further improve the model's accuracy.
- Extend the training to a larger subset if compute resources allow.
- Implement and evaluate additional Transformer architectures.

Project Repo Link: <https://github.com/nihal2704/CS507>