

Task1_TextClassification_Summarization

Assignment 1: Hugging Face Model Exploration

Objective:

The objective of this assignment is to explore an open-source Large Language Model (LLM) available on Hugging Face Hub and use it for a simple NLP task.

Input:

Environment setup commands (pip install transformers torch)

```
▼ Assignment 1: Hugging Face Model Exploration

[1] !pip install transformers torch

Requirement already satisfied: transformers in /usr/local/lib/python3.11/dist-packages (4.5)
Requirement already satisfied: torch in /usr/local/lib/python3.11/dist-packages (2.6.0+cu12)
Requirement already satisfied: filelock in /usr/local/lib/python3.11/dist-packages (from tr
Requirement already satisfied: huggingface-hub[1.0.0] in /usr/local/lib/python3.11/di
```

Code:

```
Open Source LLMs & Local Setup_week2_digital ☆
File Edit View Insert Runtime Tools Help
Commands + Code + Text ▶ Run all ▼

Successfully installed nvidia-cublas-cu12-12.4.5.8 nvidia-cuda-cupti-cu12-12.4.127 nvidia-cuda-nvrtc-cu12-12.4.127

[2] from transformers import pipeline

classifier = pipeline("sentiment-analysis", model="distilbert-base-uncased-finetuned-sst-2-english")

test_texts = [
    "I love working with Hugging Face models, they are amazing!",
    "This assignment is really difficult and frustrating."
]

results = classifier(test_texts)

for text, result in zip(test_texts, results):
    print(f"Input: {text}")
    print(f"Prediction: {result['label']} with score {result['score']:.4f}\n")
```

Output:

The model predicted the sentiment for each input sentence along with confidence scores.

```
Vocab.txt: 100% ██████████ 252K/252K [00:00<00:00, 1.40]
Device set to use cpu
Input: I love working with Hugging Face models, they are amazing!
Prediction: POSITIVE with score 0.9999

Input: This assignment is really difficult and frustrating.
Prediction: NEGATIVE with score 0.9994
```