**Hugging Face Model Exploration**

Objective: Explore an open-source LLM on Hugging Face Hub.

### Environment Setup

1. Create a Python virtual environment and install transformers and torch.  
   
 python -m venv llm\_env  
 source llm\_env/bin/activate # On Mac/Linux  
 llm\_env\Scripts\activate # On Windows  
  
 pip install transformers torch

### Model Loading Code

from transformers import AutoTokenizer, AutoModelForSequenceClassification, pipeline  
  
model\_name = "distilbert-base-uncased-finetuned-sst-2-english"  
tokenizer = AutoTokenizer.from\_pretrained(model\_name)  
model = AutoModelForSequenceClassification.from\_pretrained(model\_name)  
  
classifier = pipeline("sentiment-analysis", model=model, tokenizer=tokenizer)

### Sample Output: Sentiment Analysis

Input: I love using tools!  
Output: [{'label': 'POSITIVE', 'score': 0.9995822310447693}]  
  
Input: This is the worst experience ever.  
Output: [{'label': 'NEGATIVE', 'score': 0.9997727274894714}]  
  
Input: The workshop was okay, not too good or bad.  
Output: [{'label': 'POSITIVE', 'score': 0.9435831308364868}]

### Sample Output: Summarization

Original Text:  
Nitika is a computer science student who recently started learning about Artificial Intelligence. She is particularly interested in how large language models like GPT and BERT work. Nitika spends a lot of time experimenting with prompt engineering and tries different techniques such as zero-shot prompting, few-shot prompting, and chain-of-thought reasoning. Apart from academics, Nitika also enjoys reading books and exploring new technologies in her free time.  
  
Generated Summary:  
Nitika is a computer science student who recently started learning about Artificial Intelligence. She is particularly interested in how large language models like GPT and BERT work.