Dependencies

List of Dependencies

The following Python packages are required to run the project:

The code provided relies on several Python libraries and frameworks. Below is a list of the dependencies required to run the code successfully:

1. Python 3.x:- The code is written in Python, so a compatible version of Python is required.

2. Pandas:- For data manipulation and handling CSV files.

Command:pip install pandas

3. scikit-learn - For label encoding and metrics calculation.

Command: pip install scikit-learn

4. torch (PyTorch)- For deep learning model training and dataset handling.

Command:pip install torch

5. transformers (Hugging Face) - For pre-trained models, tokenizers, and training utilities.

Command: pip install transformers

6. numpy - Often required by pandas and scikit-learn.

Command:pip install numpy

7. tqdm- For progress bars during training (optional, but often used in Hugging Face workflows).

Command:pip install tqdm

8. datasets - Hugging Face's `datasets` library (optional, but useful for dataset handling).

Command:pip install datasets

9. matplotlib or seaborn - For visualizing metrics or data (optional).

Command:pip install matplotlib seaborn

To install all the required dependencies, you can run the following commands:

Command:pip install pandas scikit-learn torch transformers numpy tqdm datasets

- Ensure you have a compatible version of CUDA installed if you plan to use GPU acceleration with PyTorch.

- The transformers library will automatically download the required pre-trained models (e.g., roberta-base and t5-base) when the code is executed.

- If you encounter any issues, check the documentation for each library for version compatibility and additional setup instructions.

Installation Instructions

1. Clone the repository:

bash

git clone https://github.com/your-username/toxicity-detection.git

cd toxicity-detection

2. Install dependencies:

bash

pip install -r requirements.txt

3. Verify installation:

bash

pip list