# Whisper LoRA Training Docker Usage Guide

## 1 Overview

This document describes how to load, start, and use the provided Docker image for Whisper LoRA training. The workflow includes dataset preparation, training, and evaluation.

## 2 Loading the Docker Image

If you received the prebuilt Docker image file `whisper-lora-trainer.tar`, load it using the following command:

```
docker load -i whisper-lora-trainer.tar
```

Verify that the image has been successfully loaded:

```
docker images
```

## 3 Starting the Container

After loading the image, start the container using its ID:

```
docker start -ai 2ebbec699883
```

**Note:** `2ebbec699883` refers to the container ID created from the image.

Once started, the container opens an interactive shell and the `/workspace` directory becomes available.

## 4 Training Workflow

After entering the container and accessing the workspace, training can begin.

### 4.1 Step 1: Prepare Common Voice Dataset

```
python prepare_cv_data.py
```

This step prepares the Common Voice dataset by cleaning metadata and organizing audio files.

### 4.2 Step 2: Data Preprocessing

```
python preparing_data.py
```

This step performs additional preprocessing required before training.

### 4.3 Step 3: Model Training

```
python train.py
```

The training outputs, including checkpoints and logs, are saved in the `outputs` directory.

## 5 Evaluation

After training is completed, the model can be evaluated using:

```
python eval.py
```

This script evaluates the trained model on the prepared evaluation dataset.

## 6 Project Directory Structure

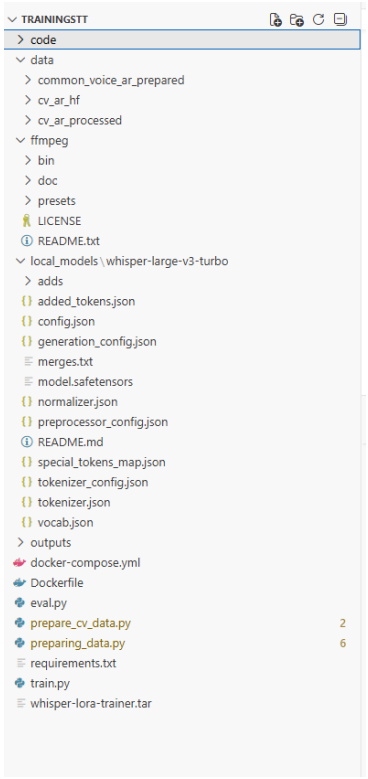


Figure 1: Project directory structure of the Whisper LoRA training container

## 7 Summary

The complete workflow is as follows:

1. Load the Docker image
2. Start the container
3. Prepare the dataset
4. Preprocess the data

5. Train the model
6. Evaluate the model

This container is designed for offline Whisper LoRA training and evaluation.