**Speech-Trainer Documentation**

**Overview**

Speech-Trainer is a web application designed to help users improve their vocal variety and expression through various exercises. The application processes audio files and provides feedback and suggestions for improvement.

**Tools Used**

* Python
* Django
* Pydub
* Whisper
* Groq
* NLTK
* Sentence Transformers
* Gensim
* Joblib

**Minimum Requirements**

* Python 3.8 or higher
* Django 3.2 or higher
* Pydub
* Whisper
* Groq
* NLTK
* Sentence Transformers
* Gensim
* Joblib
* MySQL

**Installation**

**1. Clone the Repository**

To begin, clone the repository and navigate to the project directory:

git clone https://github.com/Mithunsenthil/Speech-Trainer.git

cd Speech-Trainer

**2. Create and Activate a Virtual Environment**

Set up a virtual environment for the project:

python -m venv venv

source venv/bin/activate # On Windows use `venv\Scripts\activate`

**3. Install Required Packages**

Install all necessary dependencies:

pip install -r requirements.txt

**4. Install MySQL**

**Windows:**

Download and install MySQLclient:

pip install mysqlclient

**macOS:**

Use Homebrew to install MySQL:

brew install mysqlclient

**Linux:**

Use your package manager to install MySQL:

sudo apt-get install mysql-server

**5. Start the MySQL Service**

**Windows:**

Start MySQL from the Services panel.

**macOS and Linux:**

sudo service mysql start

**6. Update Django Settings**

Edit the settings.py file to configure MySQL database settings:

DATABASES = {

'default': {

'ENGINE': 'django.db.backends.mysql',

'NAME': 'speech\_trainer',

'USER': 'speech\_user',

'PASSWORD': 'your\_password',

'HOST': 'localhost',

'PORT': '3306',

}

}

**7. Apply Migrations**

Run the following command to apply database migrations:

python manage.py migrate

**Running the Project**

**1. Start the Django Development Server**

Run the following command to start the server:

python manage.py runserver

**2. Access the Application**

Open your web browser and navigate to:

http://127.0.0.1:8000/dashboard

**Usage**

1. Log in with your credentials.
2. Perform vocal exercises and receive feedback on your performance.
3. View charts and statistics to track your progress.