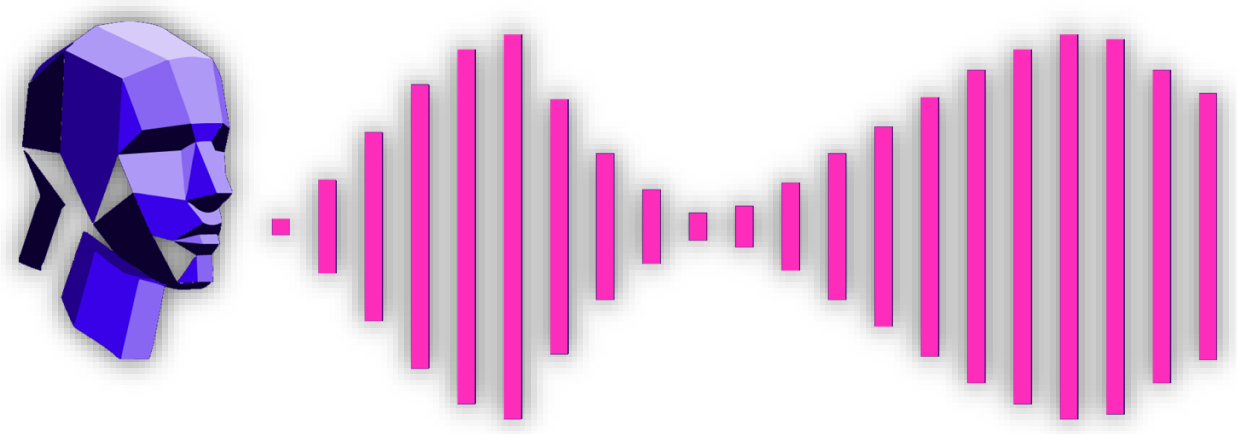
Speech Recognition Project

Template Design Software
User Guide



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1. Getting Started

Overview

This document is prepared by Yusuf Ekin, Mahsun Yıldız and Osman Turan to be help how to use voice recognition application. The project software is available for download at https://github.com/yusufEk1n/Speech-Recognition

System requirements

- Python 3.7 or higher
- Jupyter Notebook or Spider
- Git

Introduce application

- Using the application, you can record your voice or export an external audio file, which will then be used to train the knn model. After training the model with your own voice data, you can test whether it recognizes your voice by entering the "start chat" section from the menu.

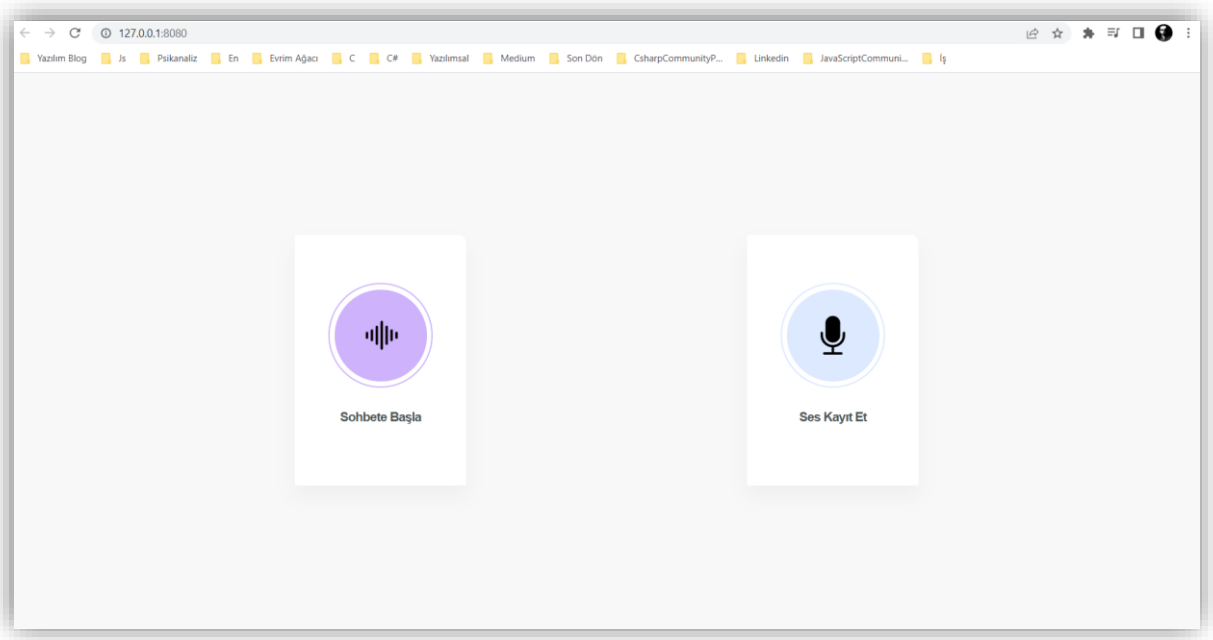
Installation steps

1. Open Terminal.
2. Run “git clone https://github.com/yusufEk1n/Speech-Recognition.git”
3. Run “python -m venv venv”
4. Run “venv\Scripts\activate”
5. Run “pip install -r requirements.txt”
6. Run “python app.py”

2. Using the Speech Recognition Software

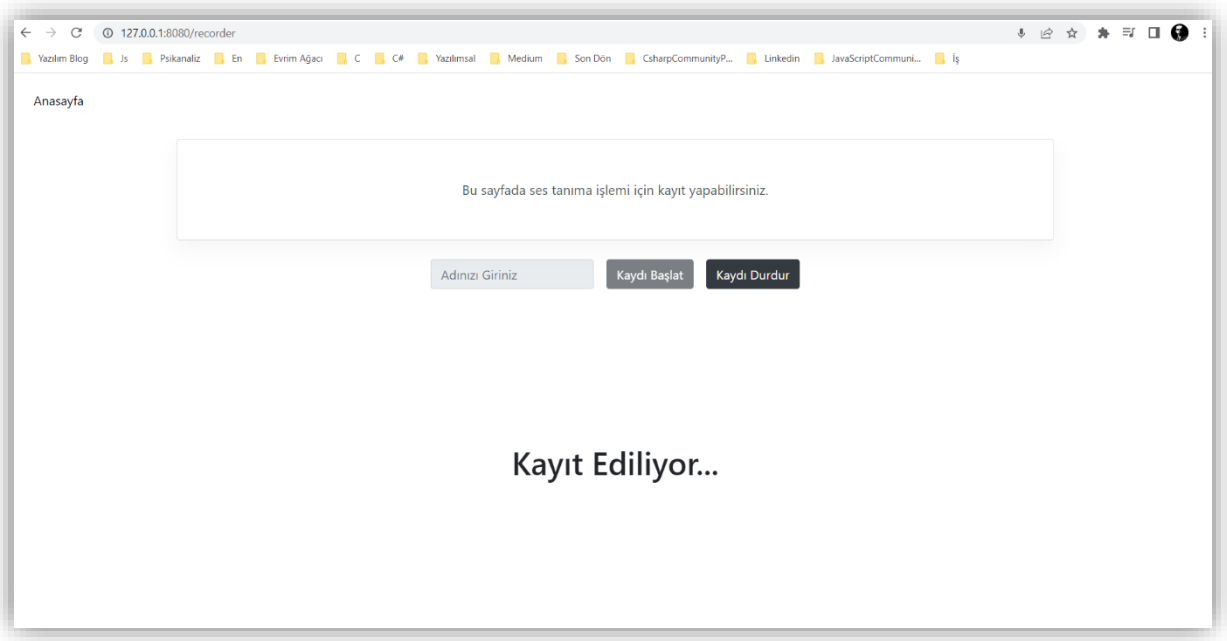
Run Application

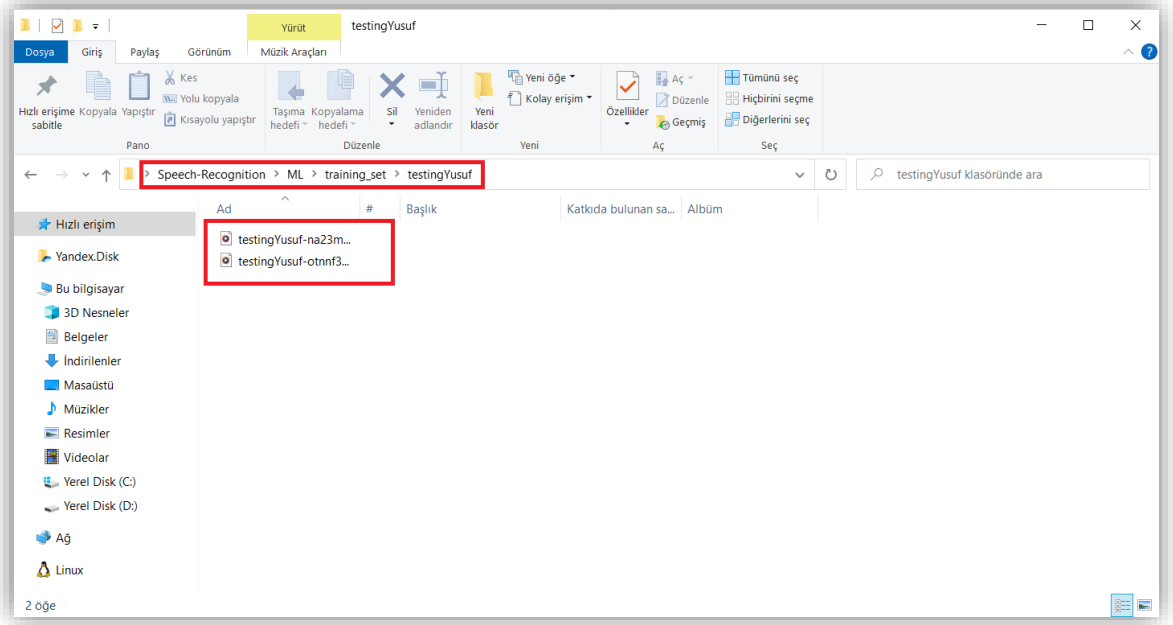
After running the application, you will see a home page like this.



Record Voice

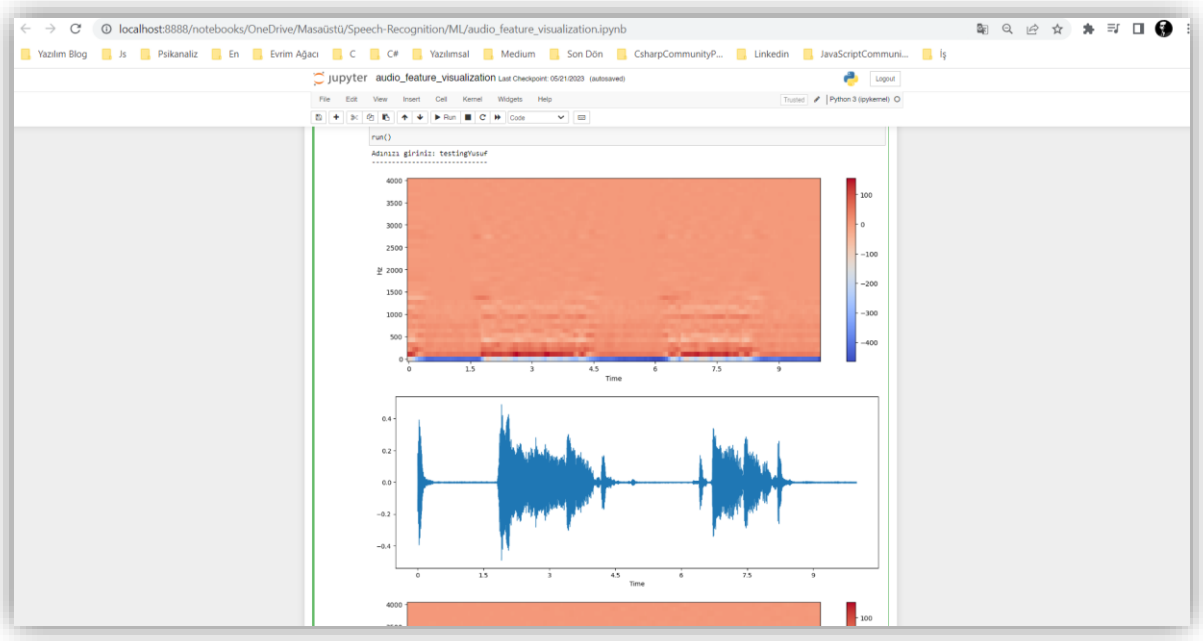
You can record your voice by entering your name in the "Ses Kayıt Et" page. Then the program records your voice at 10 second intervals and stores it in a folder.





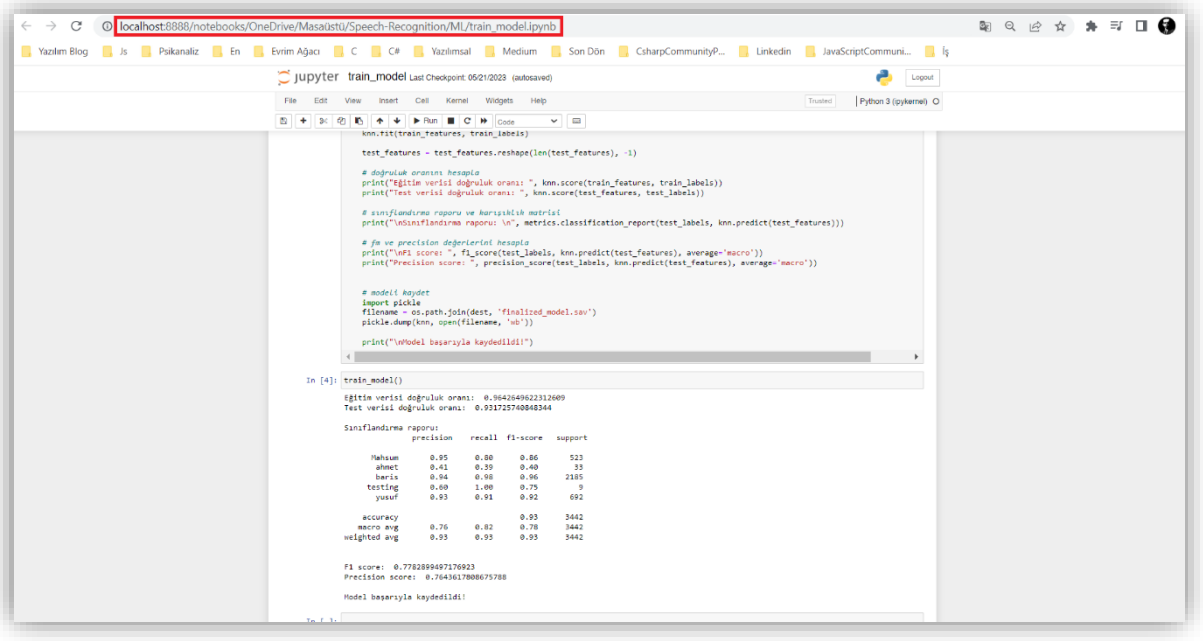
Audio Visualization

If you want, you can visualize your audio data in waveform and mel spectogram with jupyter notebook. These parts are not included in the UI.



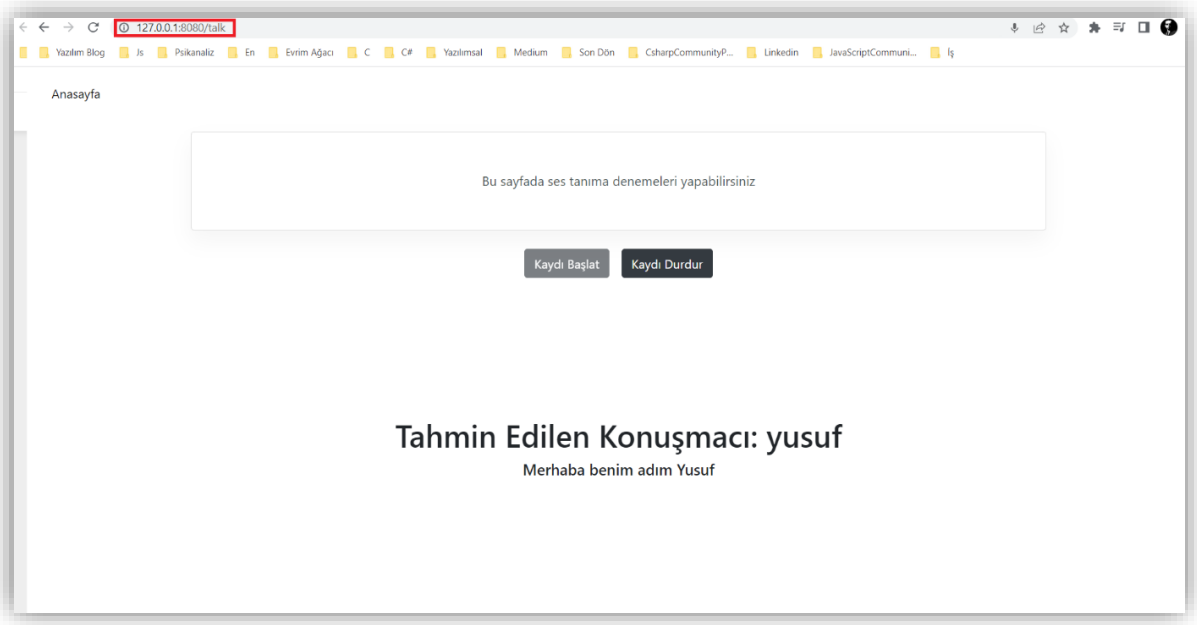
Train Model

You can train your audio data with Jupyter notebook. This is necessary for the program to recognize you.



Start to Talk

You can test whether the program recognizes you by speaking from the "Sohbete Başla" page.



3.Deploying

Description

Audio data is sent to flask server with REST API. Then the data is predicted by the model and the result is returned.