VoiceNote APP User Guide

VoiceNote is a powerful speech-enabled online notepad, designed to empower your ideas by implementing a clean & efficient design, so you can focus on your thoughts. It is a powerful web-based application, that combining speech-recognition, note-taken, documentations and more.

We strive to provide the best online dictation tool by engaging the advanced speech-recognition technology to provide the most accurate results for you. Together with the built-in the **log-in** and **History** functions, providing you the optimal user experience, and increase your work/study efficiency.

Works entirely online in your Chrome browser. No download, no install and easy registration, all to help you with a better life.

Introduction

For many of us, key-typing is slow and thus time-consuming. **VoiceNote** lets you type at the speed of speech.

VoiceNote lets you move from voice-typing to key-typing seamlessly. This way, you can dictate when convenient and type when more appropriate. You can also dictate and edit your text results right away, and continue dictating. No need to go through app modes or even stop dictation.

Other features built for productivity for both type of typing are:

- Analyze the text for entity identification;
- Save your voice notes with one-click;
- Log-in for history review and research;
- No installation, or download needed;
- Unlimited usage for free.

Target Users - who can benefit from VoiceNote?

Even though **VoiceNote** is initially built for students whose hard to come up with the instructor while taking notes. Anyone who is tired of ordinary key-typing might find **VoiceNote** useful. It might also be helpful specifically for people with difficulties in typing. Such difficulties could be of a result of physical condition, or simply not mastering the keyboard typing technique in an early enough age.

In addition, people who type a lot as their profession or hobby might find **VoiceNote** very useful as long keyboard typing might be very tiring, and even have medical implications as side effects. Needless to say, transcribers (from students to professionals) will find **VoiceNote** super helpful, as they can listen to a recording and repeat the speech into the mic, to get **VoiceNote** to transcribe it for them.

Instructions

Pre-operation:

- Connect a high-quality microphone to your PC (if you have a built-in microphone it might be good enough);
- Open your Chrome Browser(required);

Operation:

1. Enter the website

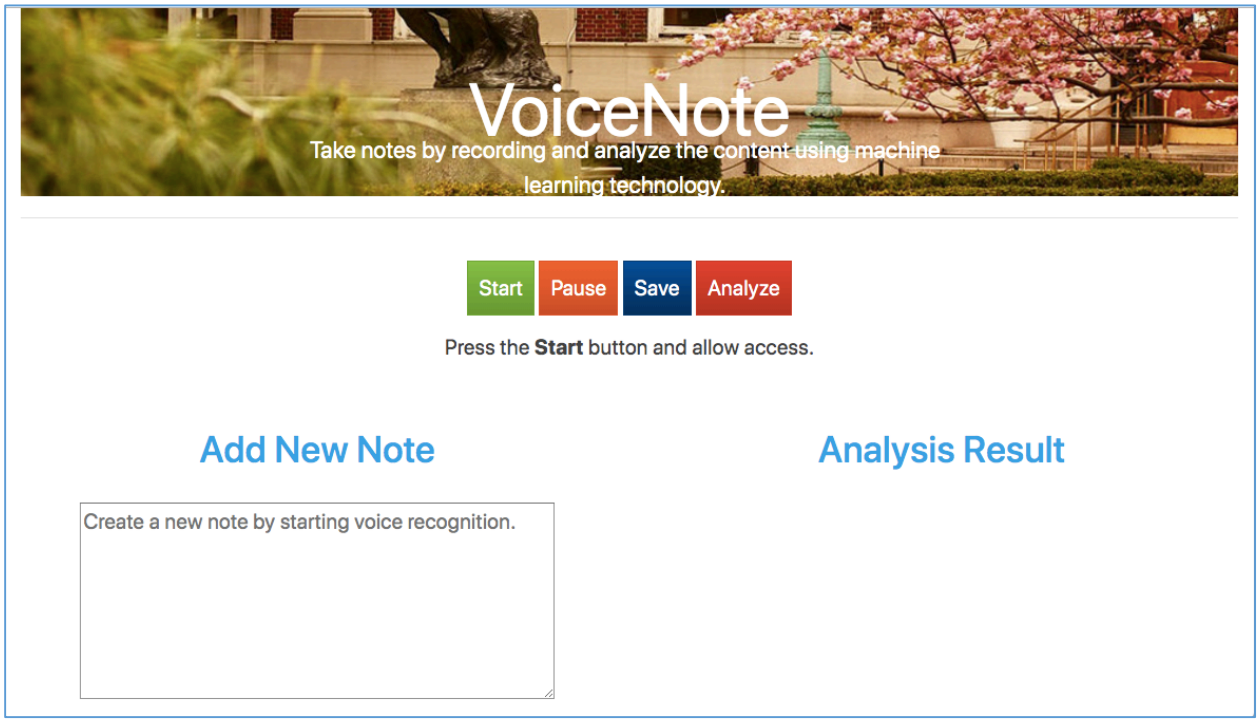

Fig1. Website Interface

2. Click the **Start** Button, start recording your voice

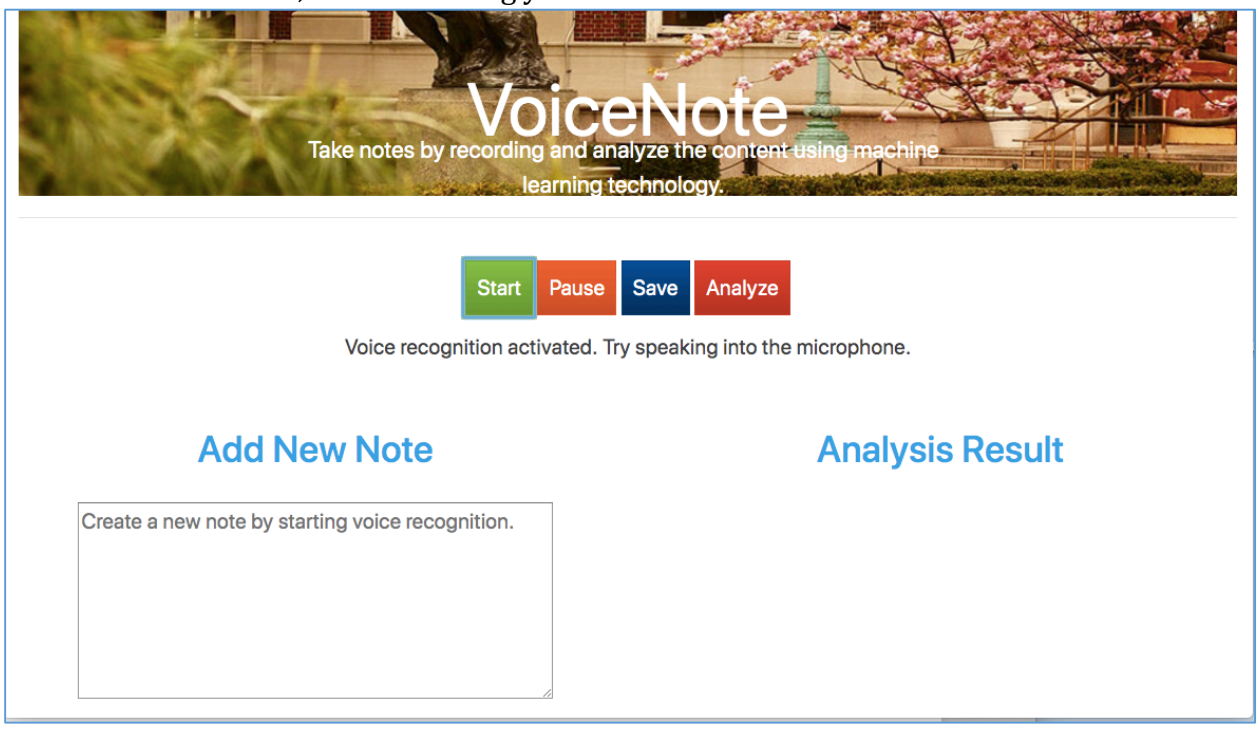

Fig2. Click Start Button

After clicking the **Start** Button, hints show below "Voice Recognition activate. Try speaking into the microphone".

**Note: For the first time only: Your browser will pop up a request for you to allow the site to listen to your mic. Click "Allow".*

3. Start dictating. Speak slowly and clearly. Space your words and emphasize correct diction for better results.

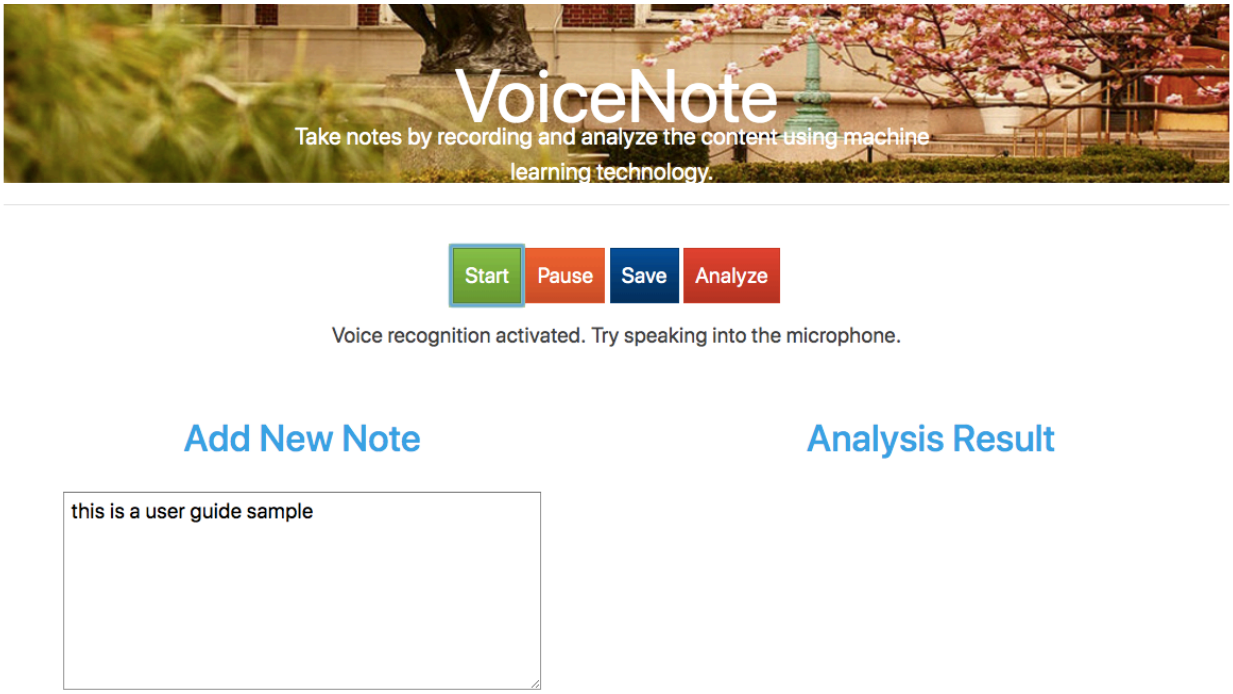

Fig3. Recording Voice

Once you click the **Start** Button, **VoiceNote** starts recording your voice for you through your microphone, and display the real-time recognition results in the left dialog box.

4. (Another Approach) Text into the left dialog box directly if you want!

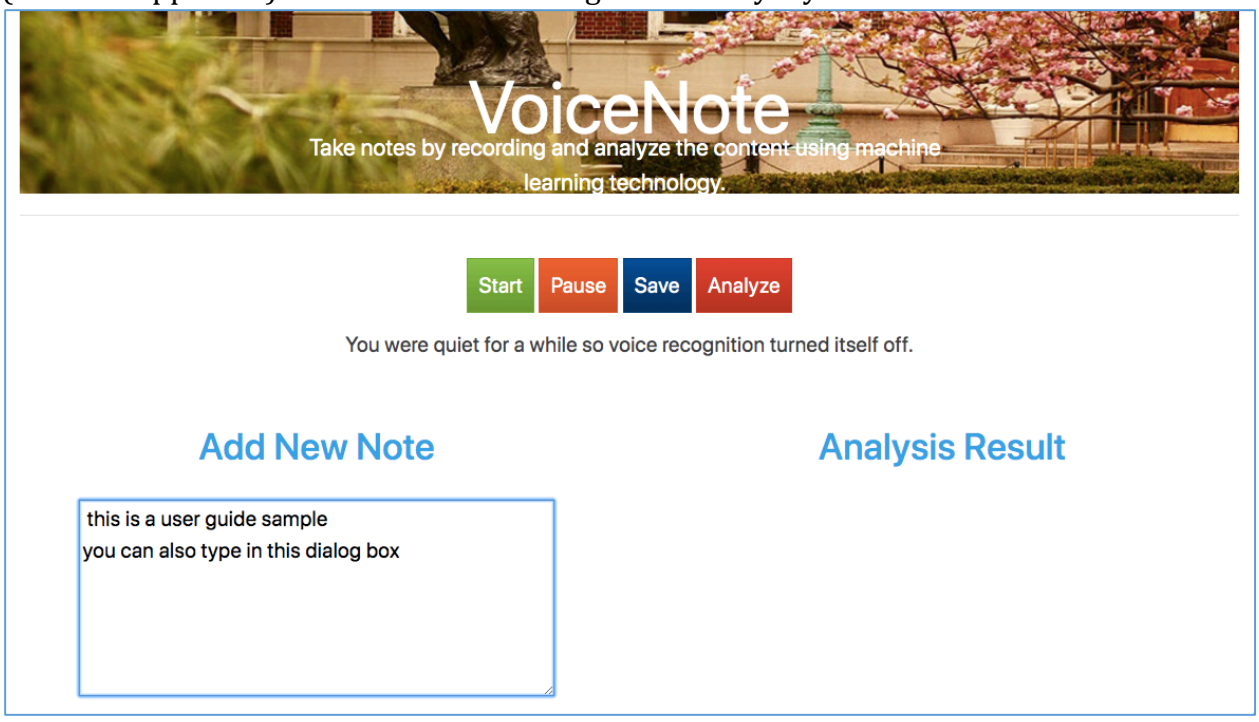

Fig4. Text Directly (another approach)

Beyond taking notes through voice recognition, another approach is type into the left dialog box directly, the text result is also displayed in real time.

**Note: You can text into the dialog box any time, no matter you are in the recording mode or not.*

5. Click **Pause** Button

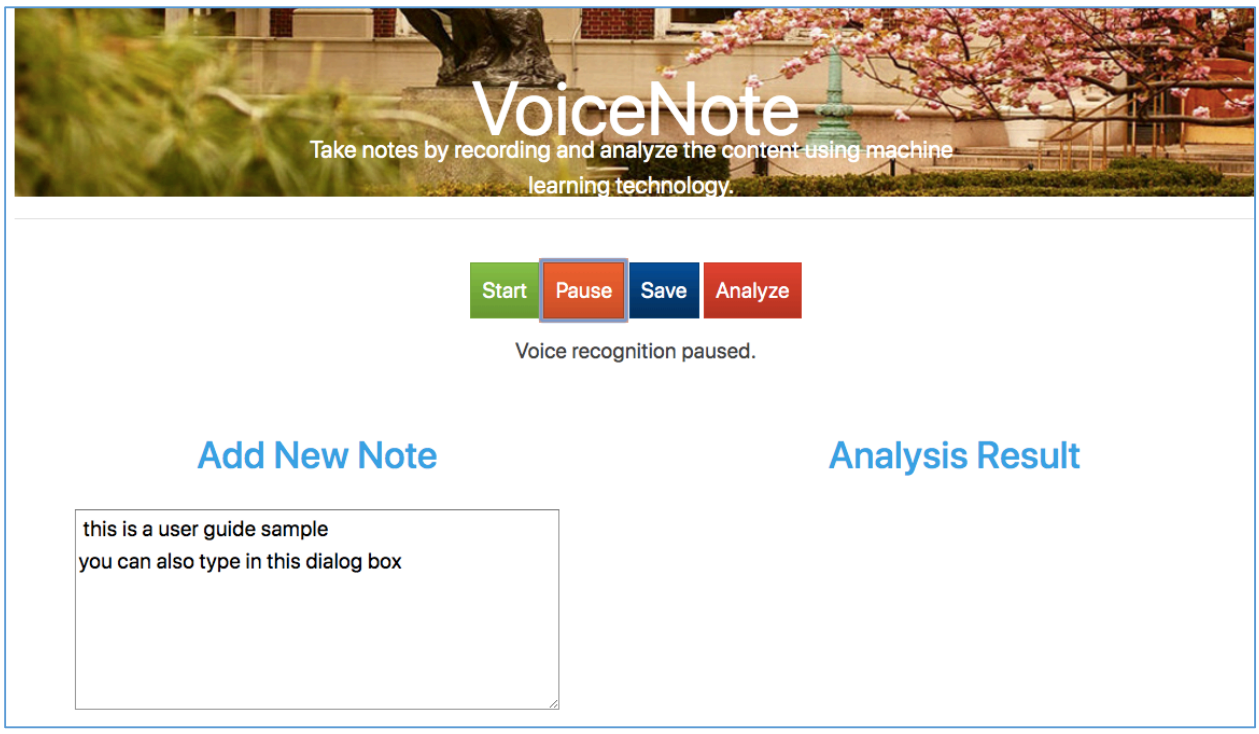

Fig5. Click Pause Button

Click the **Pause** Button to stop the real-time voice recognition.

**Note: If there is no voice be detected for a while, the voice recognition will stop automatically.*

6. Repeat the step1-4 before you save your note.

7. Click **Analysis** Button

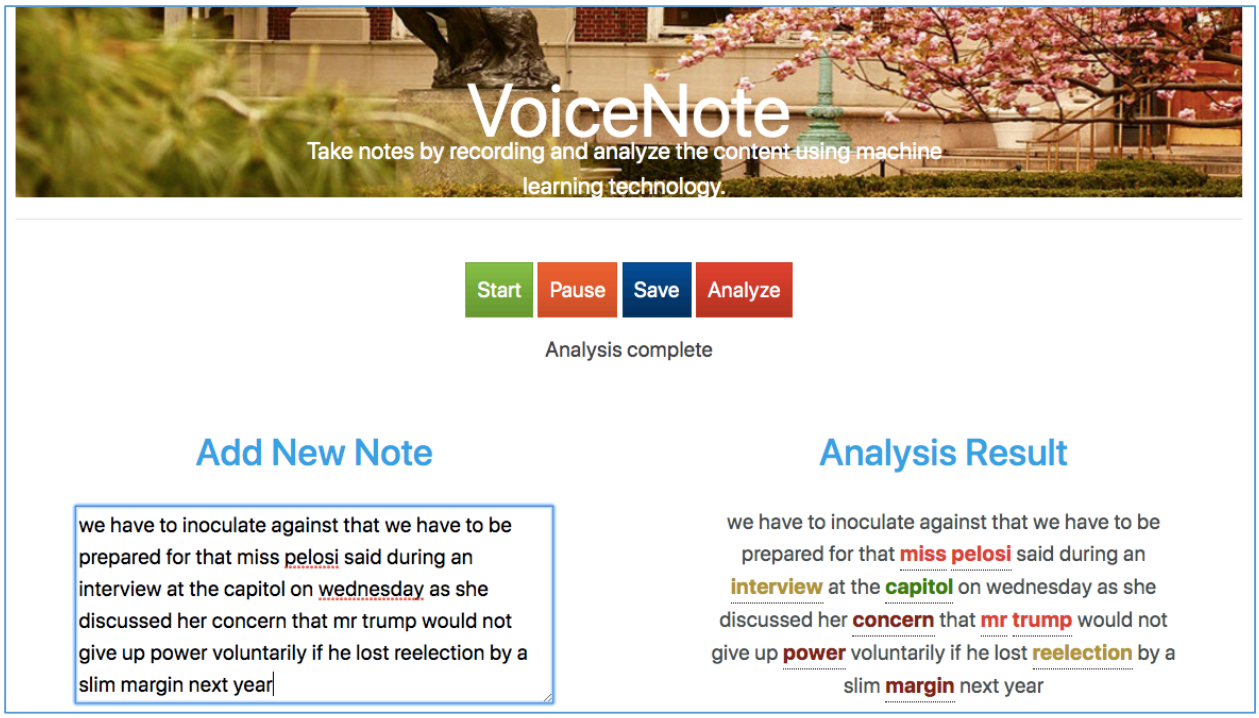

Fig6. Click Analysis Button

Click the **Analysis** Button, the analysis result is displayed on the right dialog box.

8. Check the **Entities** of the word by placing your cursor on the word.

Fig7. Check words entity

9. Click **Save** Button

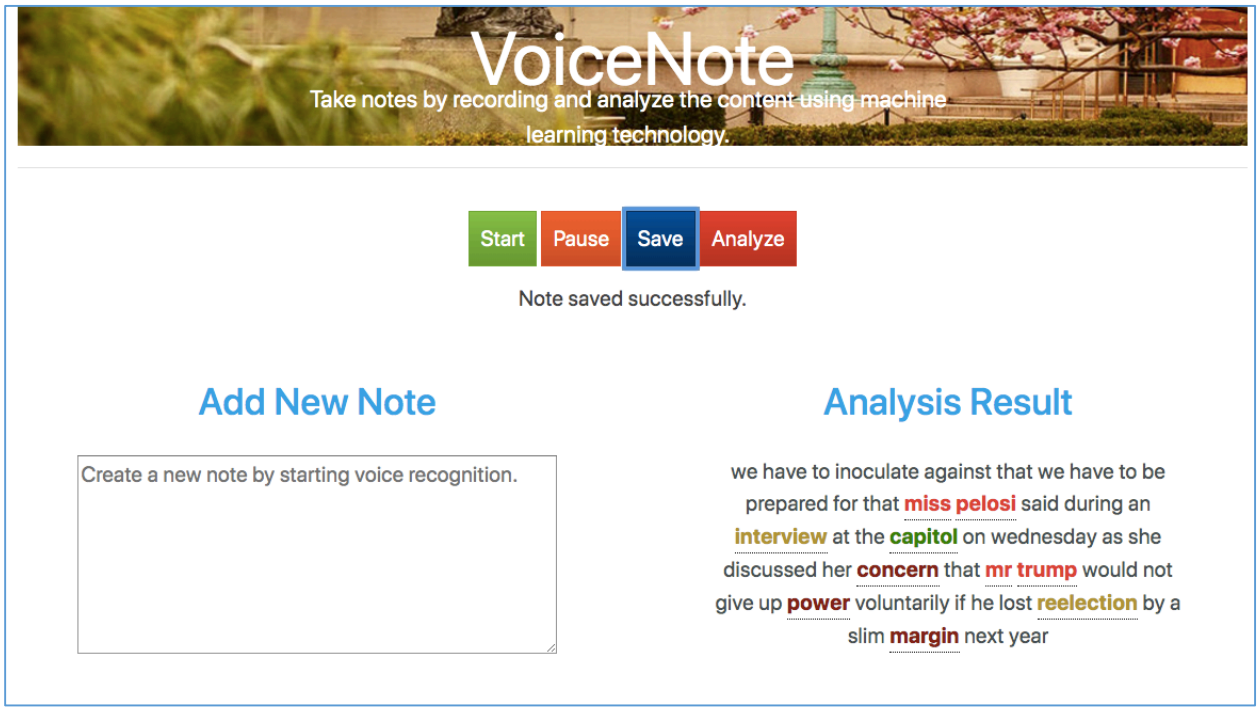

Fig8. Save the voice note

Click **Save** Button to save your voice nots.

**Note: you need to log in to save your result. The left dialog box will be cleared after saving.*

10. Check the History

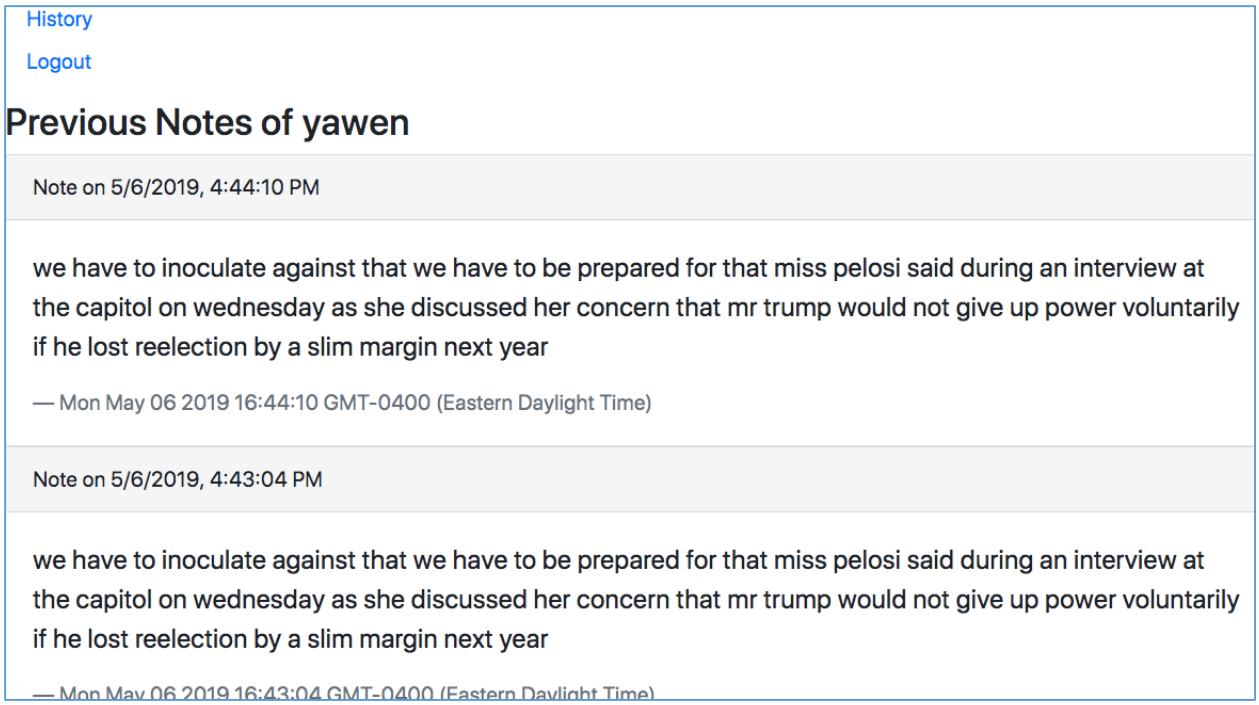

*Fig9. Check the **History***

Click **History** on the upper left corner, to check your history voice notes.

**Note: you need to log in to review your history.*

11. (Side function) Sign-up/Log-in

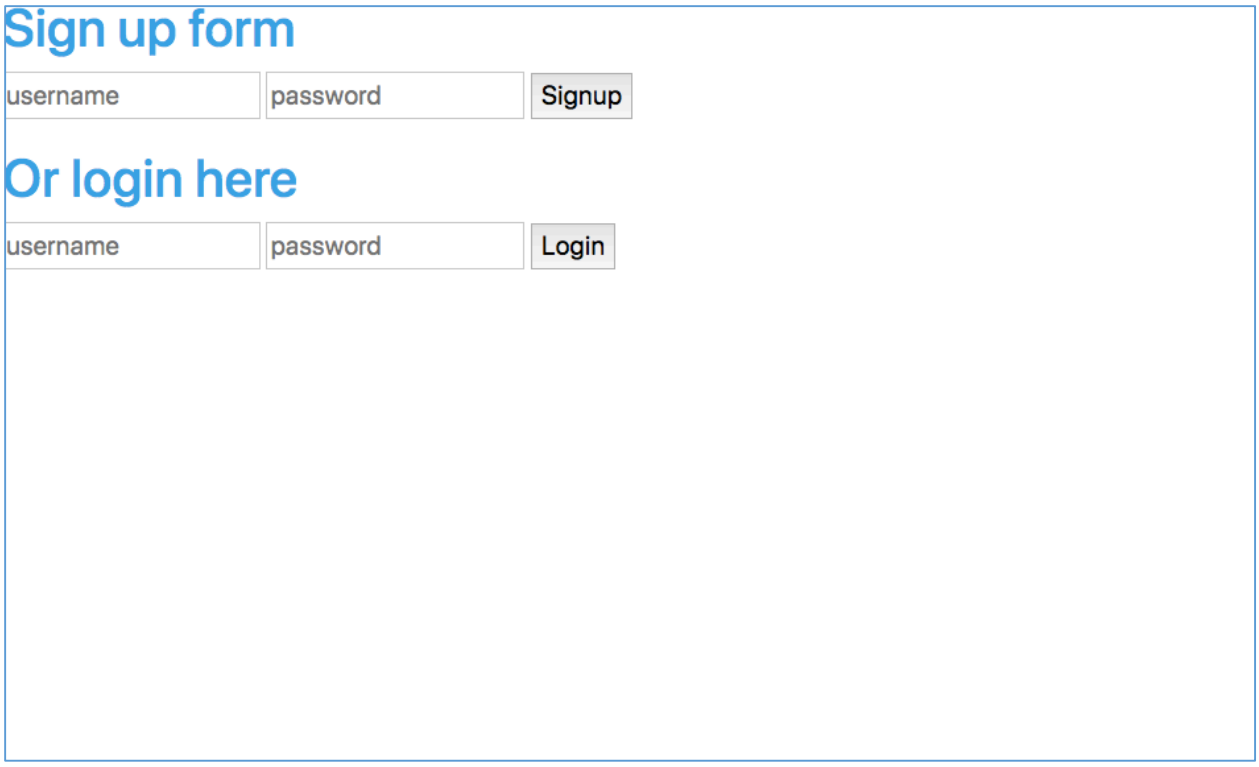

Fig10. Sign-up/Log-in

Click the **Sign In** Button on the upper left corner. If you are the first-time user, please sign-up by setting your username and password; if you are the return user, you can directly log in with your username and password.

Note: Sign in is not required to use **VoiceNote, but you need to log in to save your notes and review your history.*

Troubleshooting

Most common causes for failures are:

1. Hardware problem with the microphone;
2. Browser not Chrome;
3. Permission to listen not granted;
4. Chrome listens to the wrong microphone.

To fix the last 2 problems, you should click on the small camera icon in the browser's address bar (will appear after you click the mic) and there set the permission to Allow **VoiceNote** and pick the correct microphone from the drop-down list.

Language Supported

VoiceNote is developed based on the speech recognition fucntion built-in Chrome Browser and Google Cloud API. Right now, it only supports English language. When you do a voice search, please set English as your default language in Chrome.

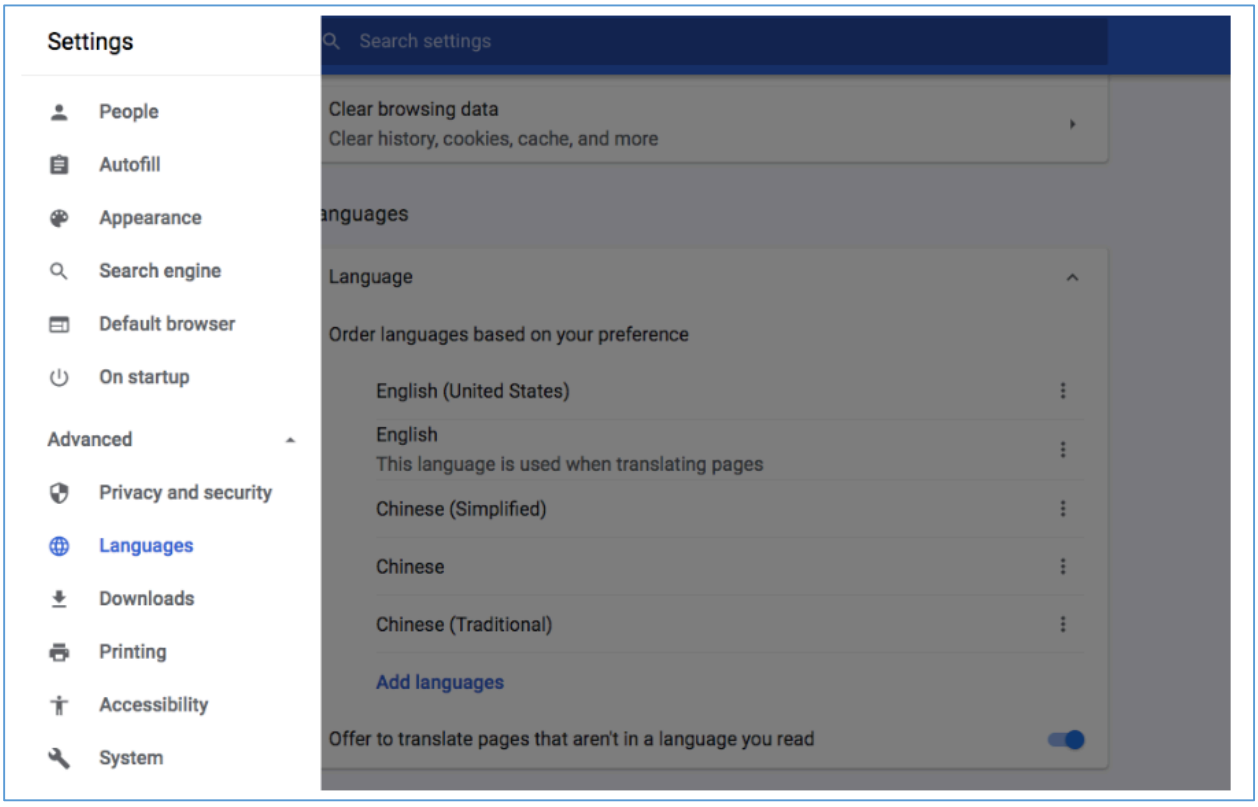

Fig11. Language Setting

Development Tools

The web application is built with MERN stack (MongoDB, Express.js, React.js, Node.js), Redis, Passport.js, Bootstrap, Web Speech API, MediaRecorder API, Google Natural Language API, and AWS S3.

- S3 - To store raw audio recording files
- MongoDB - NoSQL database
- Express.js - Web application framework for Node.js
- React.js - Building frontend interfaces
- Node.js - Open source server environment
- Redis - In-memory data structure store to cache analysis results for application speedup
- Passport.js - Authentication middleware for Node.js
- Bootstrap - Front-end component library

- Web Speech API - For speech recognition and real time transcribe
- MediaRecorder API - Record input voice stream
- Google Natural Language API - Derive insights from text using Google machine learning
- Docker - Create, deploy, and run applications by using containers
- Jira - Project management

Compatibility & System Requirements

VoiceNote is really a broad-platform app. As long as you run it through a Chrome browser it will work. No need for installation, disk space or high-end machines. It will run smoothly on your PC, desktop, laptop and Chromebook. You might try it on your tablets and phones, but it might have issues with some devices.

Usage in local environment

You can clone the entire folder and run the application using Node.js or Docker.
Build a docker image.

docker build -t node-web-app .

Run the application in localhost port 3000.

docker run -p 3000:3000 node-web-app