

ReadMe

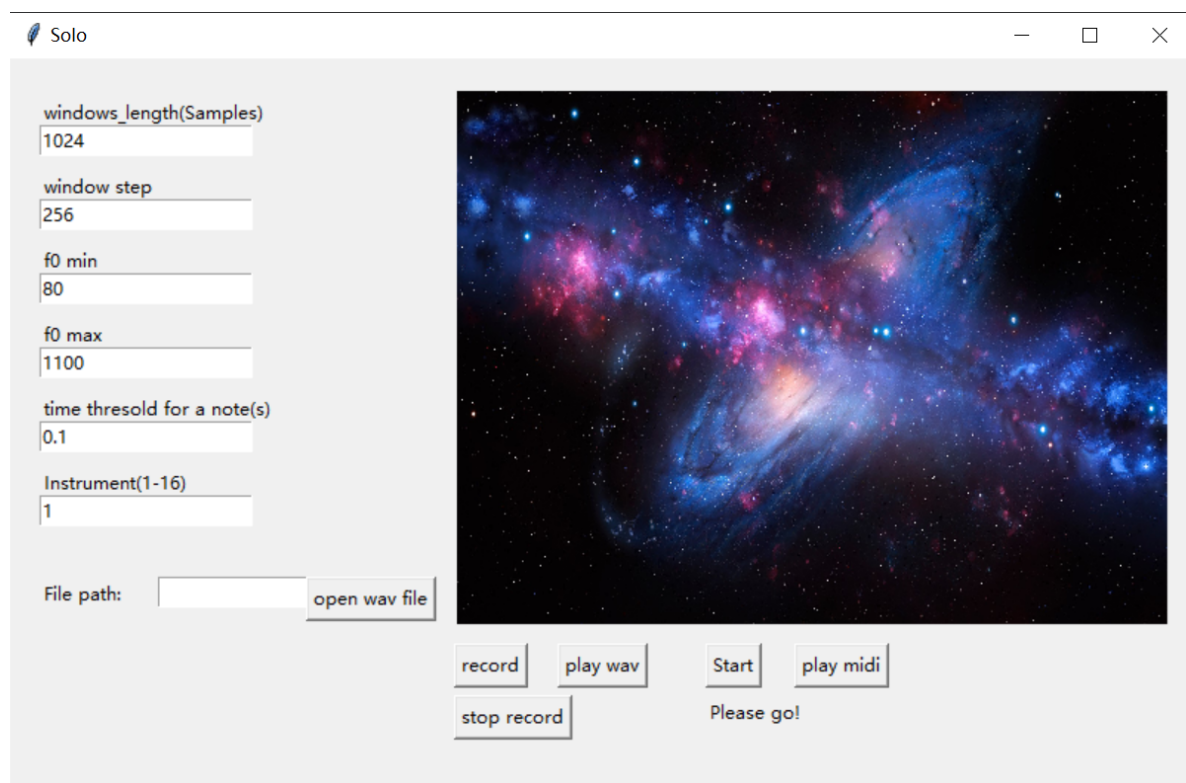
Thanks for reading!

This application "Solo acapella" is meant to give immediate feedback and prototype when you are creating music. Currently it supports composing. You can hum arbitrarily and use this application to get the same notes played by different instruments.

Start

Please change the terminal to the "**Solo Acappella**" folder and run the "**main.py**".

Run the application and you will see this:



Record and play

If you want to record your voice, please click "record" button. And if you finish your record, please click "stop record". And then you can click "play wav" to hear the original sound recorded. If you want to hear the sound by instrument, please click "Start" and then click "play midi".

If you want to import an existing .wav file, please click "open wav file" and choose the file. And then you can click "play wav" or "Start"&"play midi".

Parameters setting

If you want to set parameters manually, we allow you to change only these parameters listed in the UI.

Our application implements the yin Algorithm. The parameters are:

- **windows length:** the length of a window(samples). The default value is 1024.
- **windows step:** the step between two adjacent windows. If step is 256, it means the later window will shift 256 samples based on the previous window. The overlap will be 75%.
- $f0_{min}$: the minimum $f0$. This value should be greater than 0.
- $f0_{max}$: the maximum $f0$. This value should be greater than $f0_{min}$
- time threshold: The minimum lasting time for a note. For example, you do not want to notes that last shorter than 0.1 seconds, this value should be set as 0.1
- instrument: there are 16 different instruments. You can choose this from 1-16.