User Instructions

1. Ideal Piano is a smart piano software, the most important feature of this software is that it uses music theory logic to determine what chords are formed by the currently played notes and display them on the screen.
   This smart piano software has three modes: free play on the computer keyboard, free play on the midi keyboard and play midi file demo.
   In the play midi file demo mode, you can choose to algorithmically remove the main melody and listen only to the notes of the chords in the bass part.
   The various setting parameters of this software can be modified using `tools/change_settings.exe` or directly to the config.py to modify, save and then open the software to see the changes.

2. Please note: Clicking the play button enters the computer keyboard playing mode, clicking the midi keyboard button enters the midi keyboard playing mode, and clicking play midi enters the play midi file playing mode.
   Be sure to open Ideal Piano only after the midi keyboard is connected to the computer, or open Ideal Piano first, don't click the midi keyboard button, then connect the midi keyboard to the computer, then click the button, so as to make sure your midi keyboard can be detected properly in the software.
   If the midi keyboard still does not respond, then please open change_settings.exe to change the value of midi_device_id, if 1 does not work, change it to 2 to try, not then change it to 3, every time you change it, you have to save the settings and then reopen Ideal Piano.

   One more thing to note, if you open the sequencer software, the midi keyboard can already be used in the sequencer software, then at this time Ideal Piano can not detect your midi keyboard, because a midi keyboard can only control one software at most, so at this time the sequencer software has already occupied the midi keyboard, Ideal Piano can not detect the midi keyboard. If you want to use the midi keyboard in the sequencer, you can use the midi keyboard in the software.

   If you want to use a midi keyboard in a sequencer and use Ideal Piano at the same time, there is a very simple solution.
   You can use loopmidi, a free software, to play midi keyboards with both arranger and Ideal Piano.

3. loopmidi is a free software that allows you to play on a midi keyboard in the arranger host while Ideal Piano can display the current notes and corresponding chords, so that you can listen to the instrument you want more easily and see what you are playing in Ideal Piano.

   Take FL Studio for example, first open loopmidi, create a new midi port, (click on the + sign below) and then open FL Studio, in the midi settings in the options, select the midi keyboard you are connected to on the input side, and select the new midi port you just created on the output side.

   The input midi keyboard should be enabled, the port should not be set (left blank), and the output midi port should be set with a port number, for example 0.
   Then load an instrument sound source and set the midi output port number for this instrument to the same number as the output midi port.

   Then open Ideal Piano and change the midi_device_id in the config.py file to the number corresponding to the new midi port you created in loopmidi, usually 1, and then remember to set the parameter load_sound to False, so that Ideal Piano will not load the sound source you have set up, and when you play it, you will also be able to play it. so that Ideal Piano will

not load the sound sources it has set up, and will only play the sources from the host when playing.

For some sources, even if the midi output port is set to the same loopmidi as the host, the solution is to use the midi out plugin, set the port to the same midi output port as the host, and then set the input port of the source to the midi out port, and then select the midi out channel when playing to receive the data. (Another important point is that

(There is also a very important point is that you must first import the source, then import the midi out plug-in, and then set the port, every time you change the new source to this order, otherwise the data still can not pass loopmidi)

4. through loopmidi can also be achieved in the arrangement of the host to play the work and at the same time Ideal Piano can also demonstrate the current notes and chords judgment, just need to arrange the host's midi output port and the source of the midi output port are set to the same number, this number is corresponding to loopmidi your new midi port can be.

   For example, if loopmidi creates a new midi port called midi port A, then in the midi settings of the arranger host, set the port corresponding to midi port A to 0, then set the midi output port of the audio source to 0 as well, and then set the midi_device_id in the configuration file of Ideal Piano to the number corresponding to midi port A. The midi_device_id of port A is generally 1, but it may be different for different computers and different midi keyboards. If 1 does not respond, try changing it to 2, 2 does not work and then 3, and so on.

   After each change, save the settings file (or directly open change_settings.exe to search for parameters to modify more convenient), and then reopen Ideal Piano.exe. Then click the midi keyboard button to enter the midi keyboard mode, at this time in the compilation host to play the midi output port of the set When you play the track with the midi output port, you can see that Ideal Piano also follows the same notes in real time.

   For some sources that are set to midi out but still can't pass data to loopmidi, the solution is the same as in #2, use midi out as a relay station, but this is slightly different from playing with a midi keyboard.

   When playing with a midi keyboard, you can select the midi out track to play, and the sound will come from the source paired with the midi port, and Ideal Piano can also receive the midi signal. I found a solution to this problem by overwriting the track.

   The solution I found was to override the notes from the track of the source paired with the midi port into the piano window of midi out, then mute the track of that source and let midi out play only, then I could hear the sound of the track of the source when it was not muted before, and I could also transfer data to loopmidi, so Ideal Piano could also So Ideal Piano can receive the midi signal in real time.

   Here I really want to say that loopmidi is really good (although in some cases you need to mess around with it a little bit, but it still could do a lot of things)

5. If you want to use Ideal Piano on macOS or Linux, first install python (>= 3.7), preferably 32-bit, then run `pip install pygame pyglet==1.5.11 keyboard mido midiutil` in cmd, then put the packages folder and copy and paste `Ideal Piano start program.pyw` into the main folder.

   Linux: open terminal in the main folder, for example if you have python 3.8 installed, run

   ```
   sudo python3.8 "Ideal Piano start program.pyw"
   ```

   and you will be able to open the software and use it.

macOS: open terminal, cd to the path of the main folder, for example if you have python 3.8 installed, run

```
sudo python3.8 "Ideal Piano start program.pyw"
```

and you will be able to open the software and use it.

(Note: At the moment, after testing the virtual machine, it seems that macOS has a lot of compatibility problems with pygame, tkinter and pyglet, which makes Ideal Piano likely to not work properly, I will try to find time for macOS compatibility, and there should be a macOS compatible version in the subsequent version.)

If you encounter any problems please contact me immediately, contact information is at the end.

6. You can set the path of the sound source when playing the piano, the format of the sound source file should be unified, you can set the format of the sound source file sound_format (such as wav, mp3, ogg, etc.) and the path of the sound source file sound_path in config.py.

If you have encountered any problems needing help or have any feedback on the use of please add my qq number 2180502841 to contact me or send emails to 2180502841@qq.com, thank you for your support ~