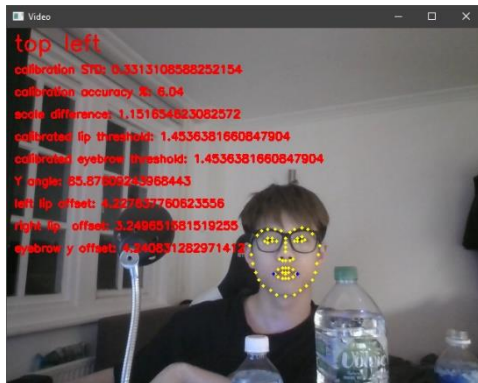


User Manual for ItchyAI

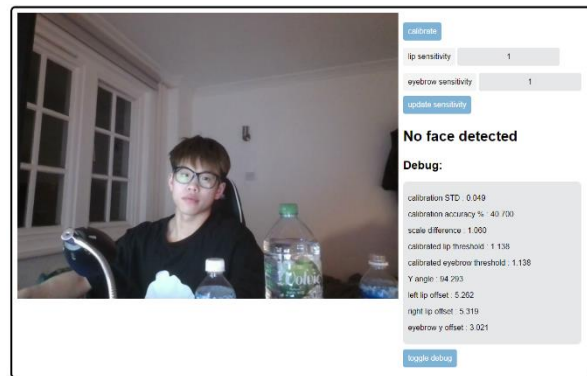
Thanks for using ItchyAI to take care of your itchiness. Here are the details you need to know when using our algorithm.

Introduction

There are two versions of ItchyAI available for user to user: Experimental version and Web version.



Experimental version



Web version

Experimental version:

The algorithm will calculate automatically, and the result index will be shown red on the surface of the program. Landmarks will be shown in yellow for the technician to check the change of tester's facial movement.

Web version:

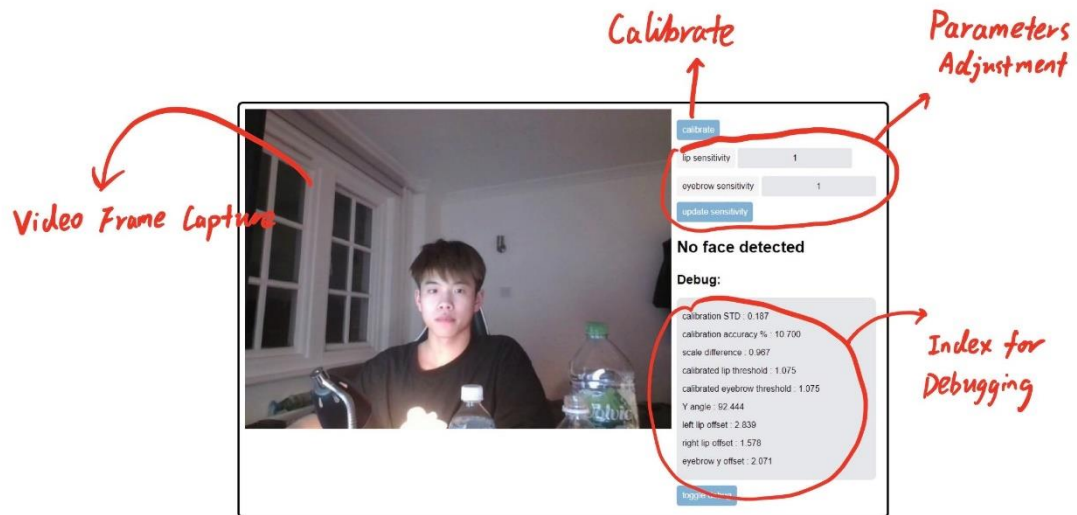
This version has a better interface. User can adjust lip sensitivity and eyebrow sensitivity manually. User should calibrate the face data first, then continue the itchiness detection process. All the variables will be shown in the grey box on right.

For both version, these variables will be shown:

1. calibration STD
2. calibration accuracy
3. scale difference
4. calibrated lip threshold
5. calibrated eyebrow threshold
6. Y angle
7. left lip offset
8. right lip offset
9. eyebrow y offset

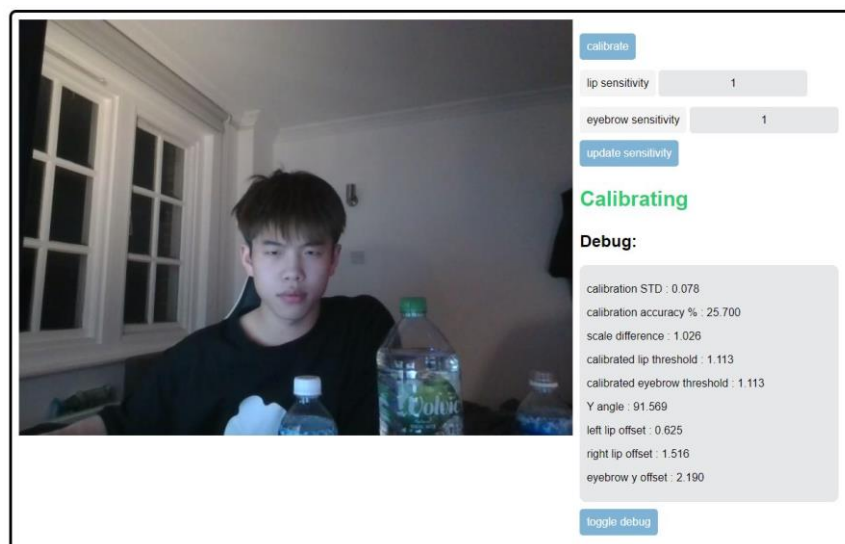
Instruction

we use web version as an example:



Step 1: Calibration

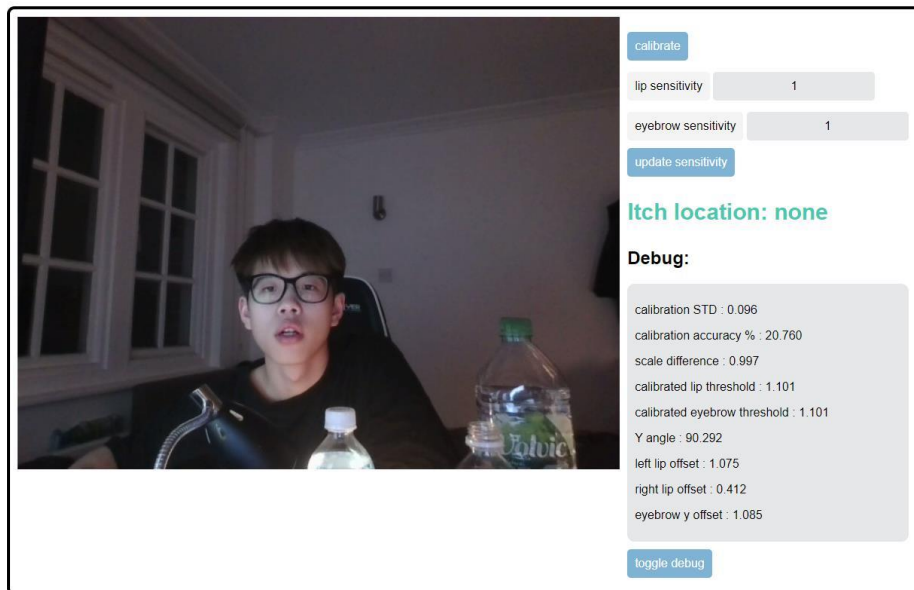
Tab the calibrate button, then the algorithm will calculate some basic facial data for itchiness detection. During the process, **Green calibrating** will be shown on the surface.



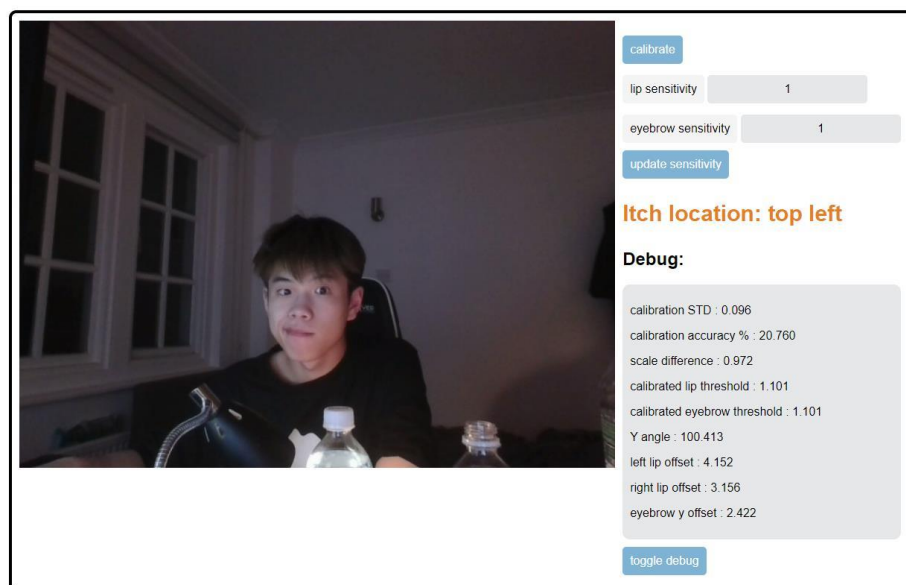
Step 2: Detection

After calibration, the algorithm will detect facial inching to determine the location of itching. If you face direct to the camera and have no facial movement compared to the

calibration data, "Itch location: none" will be shown in surface.



If the algorithm detected the minor movement on your face (lip and eyebrow), the itch location will be shown in the application.



The itchiness on the face has been separate into four sections: **Top Left, Top Right, Bottom Left, Bottom Right**. By judging the movement of the lip and eyebrow, the location of itchiness will be represented as these four sections in the application.