

## Using Click-it

### Step 1: Initiation

Open the *Click\_It.m* file using Matlab and run the program. When prompted, click on the *Add Path* option to place the folder containing the program in the Matlab path. The GUI of the program will then open. The GUI can be seen in Figure 1.

The buttons and text boxes function as follows;

- ‘Browse’ button: Use this button to open the Video file you want to track.
- ‘Frame Rate’ textbox: Enter the frame rate you want to use to sample your video. (e.g., to sample one frame per second from a 30frame/sec video, use 30).
- ‘Start Frame’ textbox: Enter the starting frame for the portion of video from which you want to sample.
- ‘Stop Frame’ textbox: Enter the end frame of the portion of video from which you want to sample.
- ‘Run’ button: After filling all the fields, press ‘Run’ to begin annotation.

### Step2: Object Detection

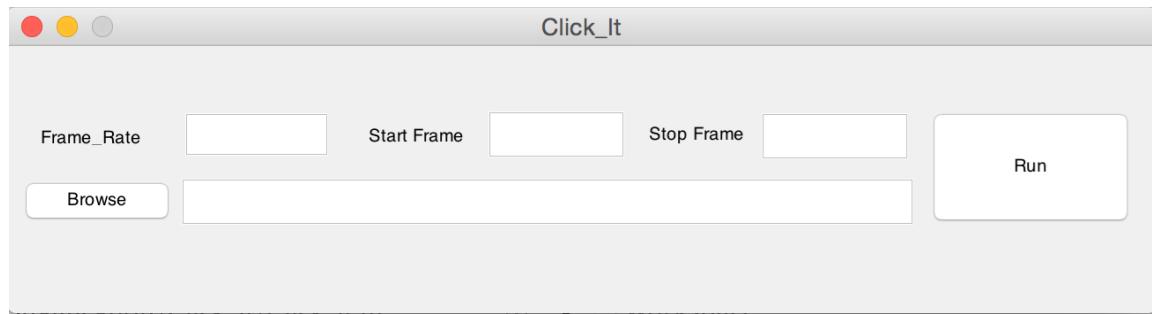


Figure 1: The GUI of the Click-it program

After pressing ‘Run’, you will see the first frame of the part of video you wish to track (Figure 2). Use the cursor in order to click on the objects you wish to detect. The program stores the x-y position of each object in addition to the mouse button clicked. If you have 1-3 objects, you can use the different mouse clicks to distinguish between them. If there are more than 3 objects, you can use keyboard buttons to distinguish between them. To use the keyboard, point the cursor to the object, and click the keyboard button annotated

to that object.

After detecting all the objects in the frame, click the “return/enter” button on the keyboard. The detected objects will be shown on the frame using an alphabetical character (either the key pressed or M1, M2 or M3 for the three mouse buttons). An example can be seen in Figure 3.

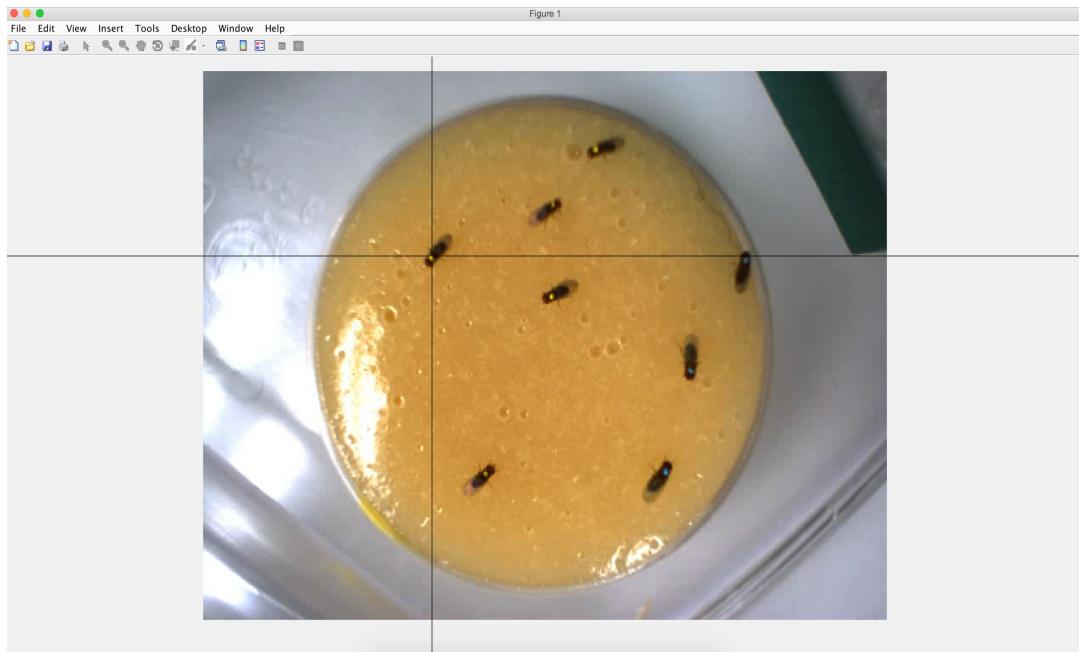


Figure 2: A sample frame opened after pressing the ‘Run’ button in Click-it. The cursor can be used to detect each object in the video frame.

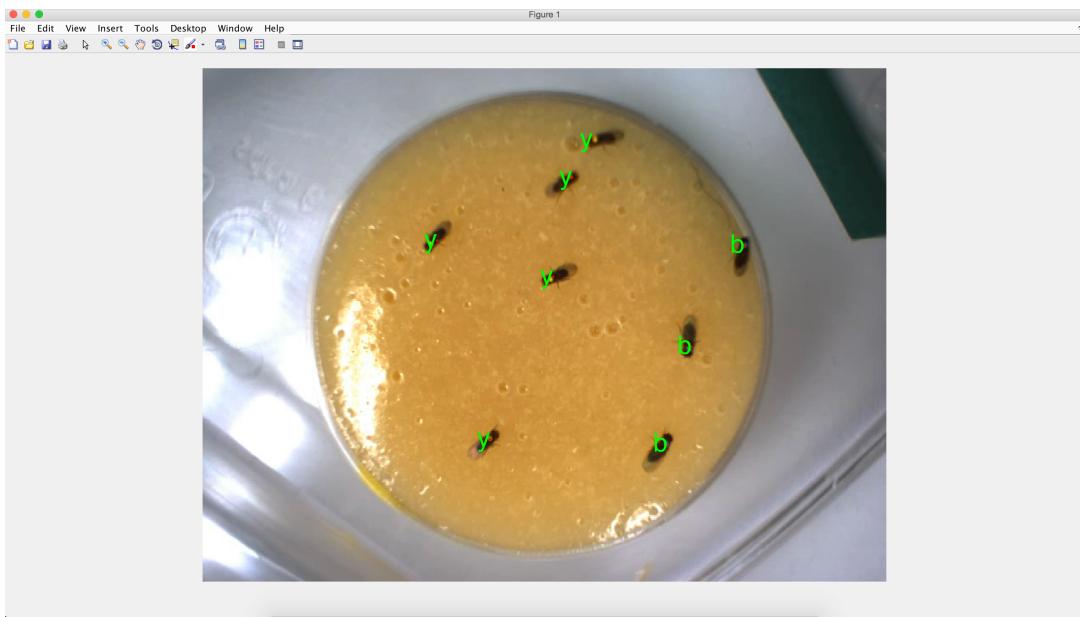


Figure 3: The resulting frame with detected objects shown and with alphabetical characters in green.

You will be prompted to continue to the next frame and can continue by clicking ‘Yes’. At this point, if you have made a mistake, you can redo the current frame by clicking ‘No’.

Completion: After Annotating the last frame and clicking “Yes”, no new frame will pop up.

Upon completion, results will be saved in a CSV file with the same name as the video file, but with ‘\_Objects.csv’ appended to the name. This file will be saved to the same folder as the video. Below you can see a sample of the file:



Figure 4: Prompt to continue. You can press ‘Yes’ to continue and ‘No’ to return to current frame. The ‘No’ option can therefore be used to correct errors on the current frame.

Table 1: A sample of the resulting data extracted from a video.

A	B		D	E	
1	Index	Frame_ID	ascii_code	X	Y
2	1	1	121	267	204
3	2	1	121	409	150
4	3	1	121	465	86
5	4	1	121	407	246
6	5	1	121	333	442
7	6	1	98	545	438
8	7	1	98	573	330
9	8	1	98	633	206
10	9	6	121	275	202
11	10	6	121	433	128
12	11	6	121	457	84
13	12	6	121	411	244
14	13	6	121	337	434
15	14	6	98	545	440
16	15	6	98	573	326
17	16	6	98	635	208