

LIVE VIDEO ANALYSIS TOOL

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Install MATLAB – Recommended version of MATLAB is show below in the image

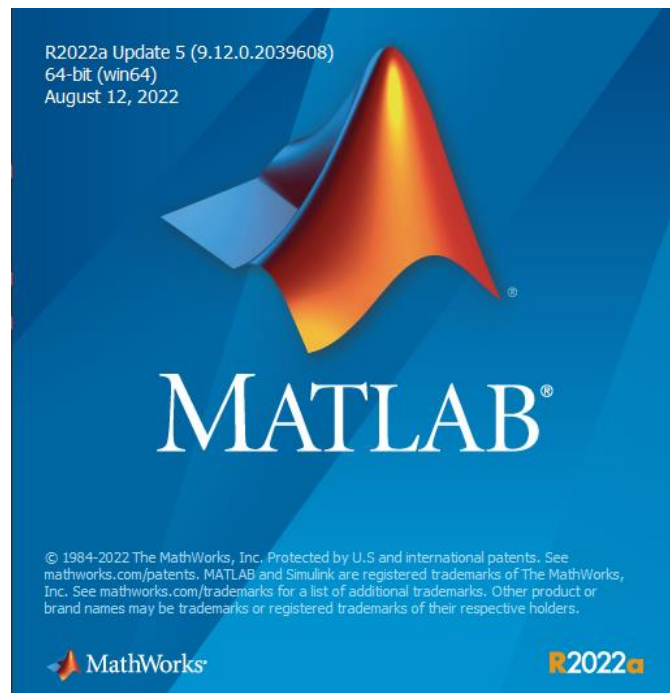


Figure 1: MATLAB Version

Install – MATLAB Support Package for USB Webcams from the Add-Ons in Home Section

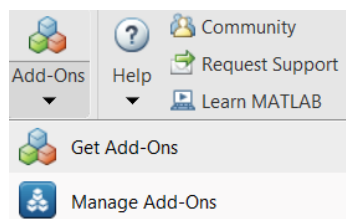
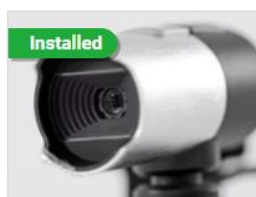


Figure 2: Click Add-Ons



MATLAB Support Package for USB Webcams

by MathWorks Image Acquisition Toolbox Team **STAFF**

Acquire images and video from UVC compliant webcams.

[Hardware Support](#)

Figure 3: USB Webcam Add-On

Set Camera Resolution, FPS, and Crop Video

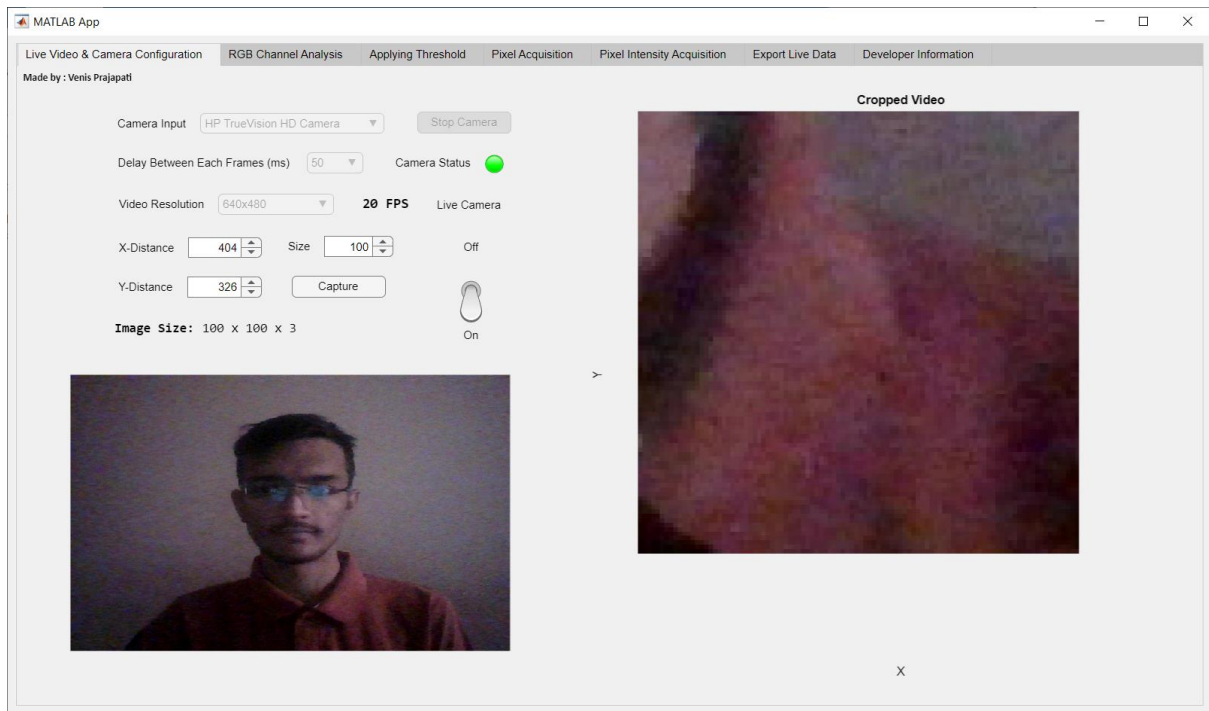


Figure 4: Live Video & Camera Configuration Tab

Perform RGB Channel Analysis with Histograms

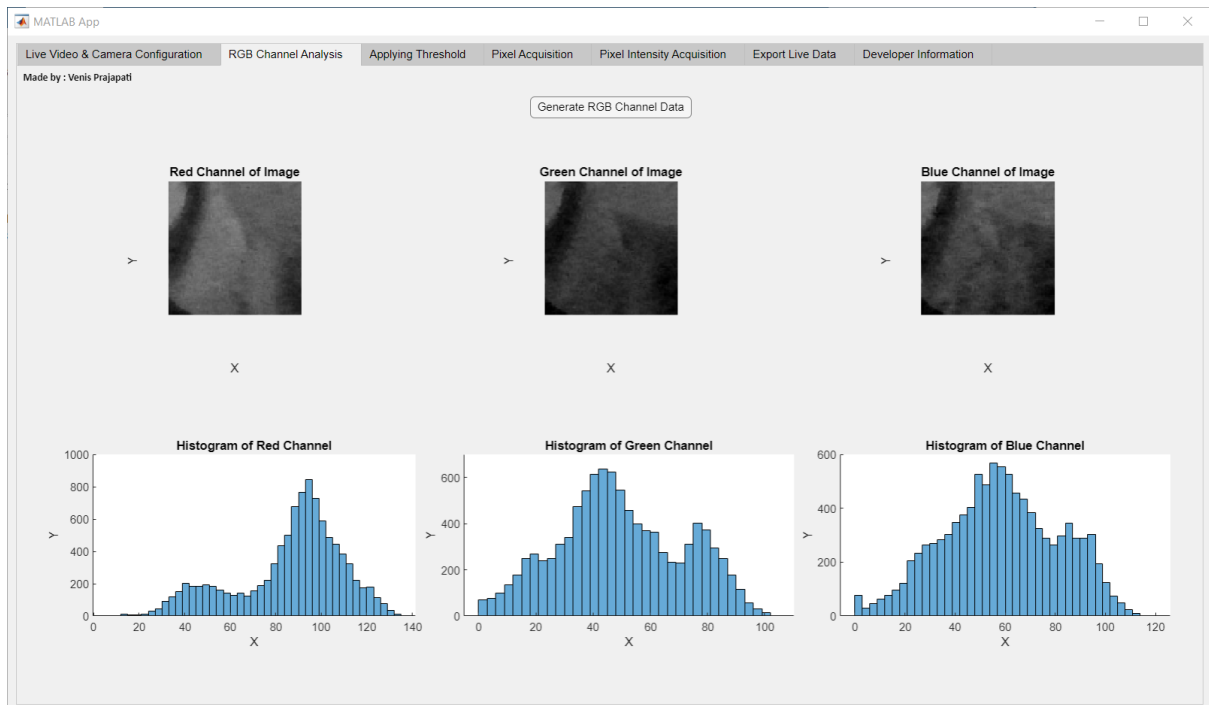


Figure 5: RGB Channel Analysis Tab

Set Camera Resolution, FPS, and Crop Video

Apply Specific range of Threshold Values and Generate Analysis of ROI in percentage with Average Intensity values of RGB colours

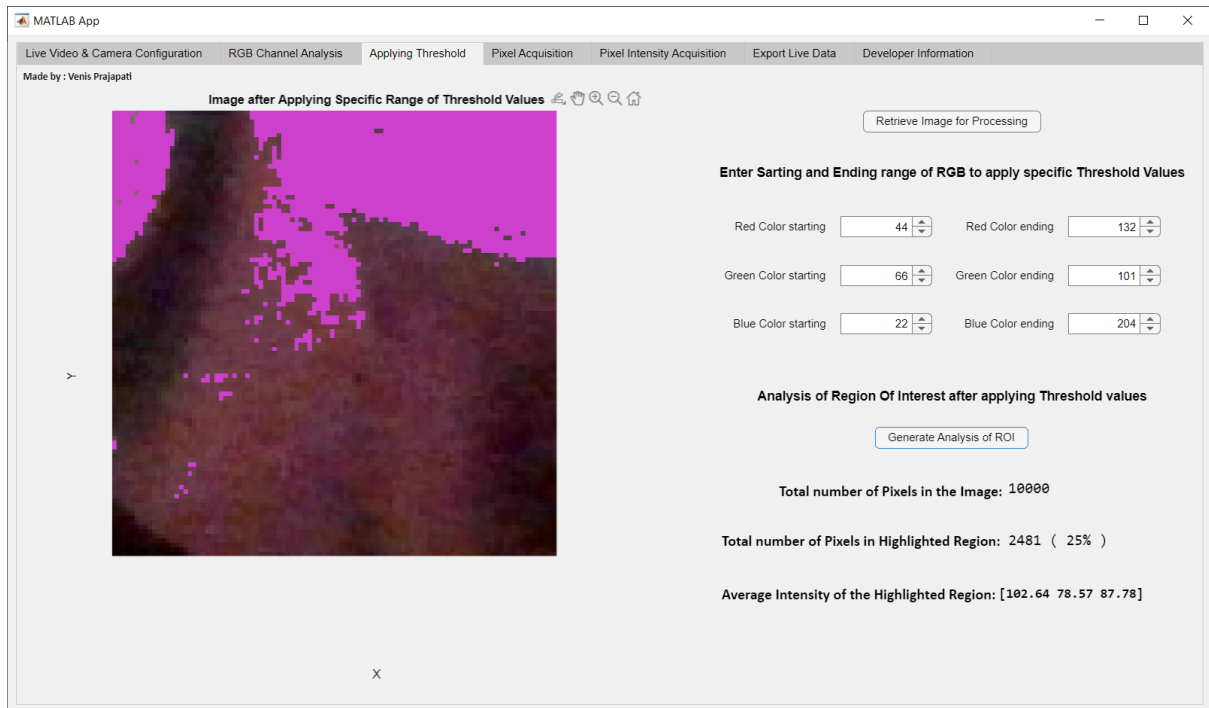


Figure 6: Applying Threshold Tab

Locate Particular Pixel from the Cropped Image to capture Its RGB Intensity values further

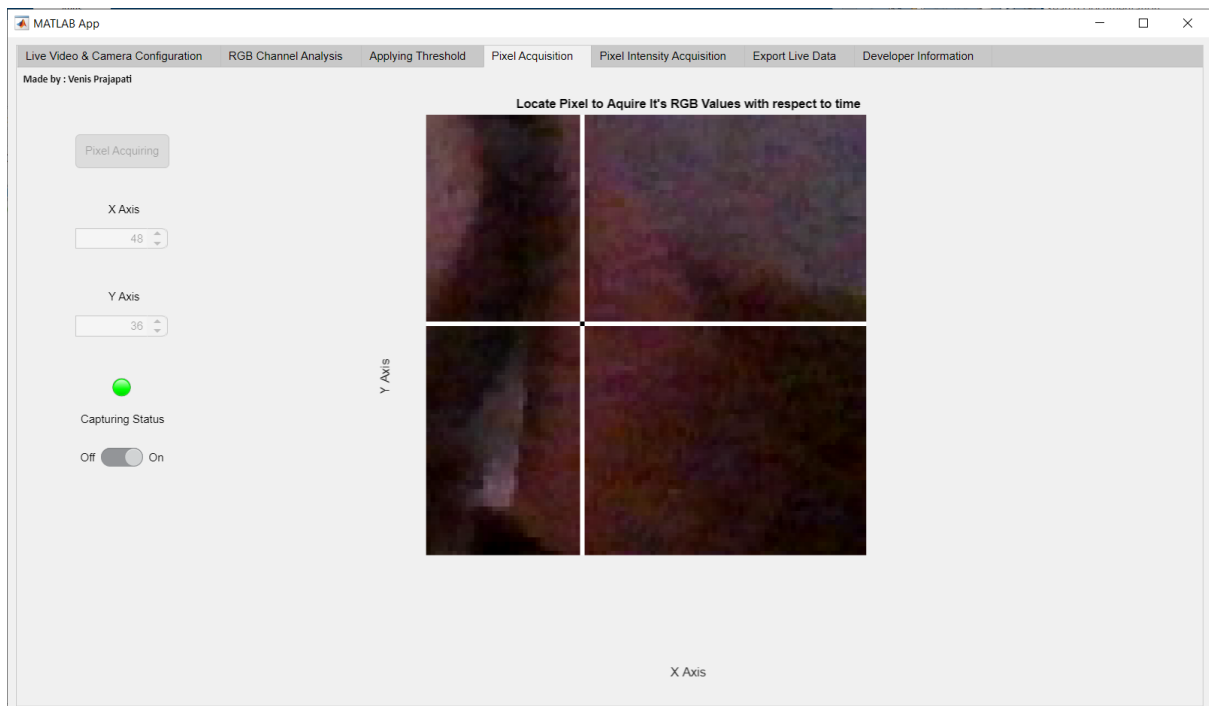


Figure 7: Pixel Acquisition Tab

Capturing Red, Green & Blue colour Intensities with respect to time at 2 Frames per Seconds

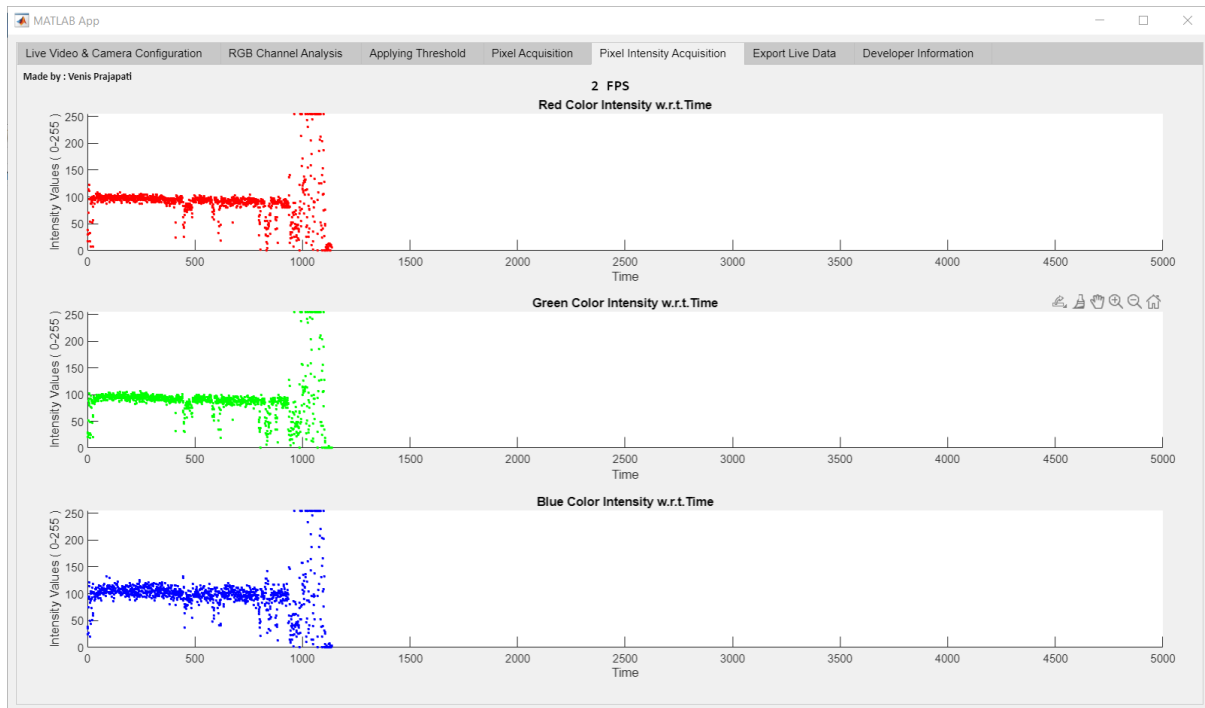


Figure 8: Pixel Intensity Acquisition Tab

Exporting Live Data of All time captured through webcam in Tabular form, that can be saved to .xlsx format later by selecting and pasting it to excel files

The figure displays the MATLAB App interface for the Export Live Data Tab. It shows a table with 5 columns: Data Index, Time, Red Pixel Intensity, Green Pixel Intensity, and Blue Pixel Intensity. The table contains 22 rows of data, representing 22 frames captured at 2 FPS. The data shows a general trend of increasing intensity over time, with some fluctuations. The table is labeled 'Made by : Venis Prajapati'.

Data Index	Time	Red Pixel Intensity	Green Pixel Intensity	Blue Pixel Intensity
1	1	52	43	43
2	2	44	43	48
3	3	51	45	45
4	4	49	43	38
5	5	41	47	51
6	6	49	43	36
7	7	53	41	47
8	8	50	44	53
9	9	53	50	51
10	10	51	46	50
11	11	47	36	47
12	1	41	43	49
13	2	44	45	49
14	3	42	36	42
15	4	41	40	43
16	5	49	43	36
17	6	47	34	57
18	7	50	45	49
19	8	53	42	43
20	9	44	40	46
21	10	42	46	61
22	11	38	38	40

Figure 9: Export Live Data Tab

Developer Information with contact links along with project link



Figure 10: Developer Information Tab