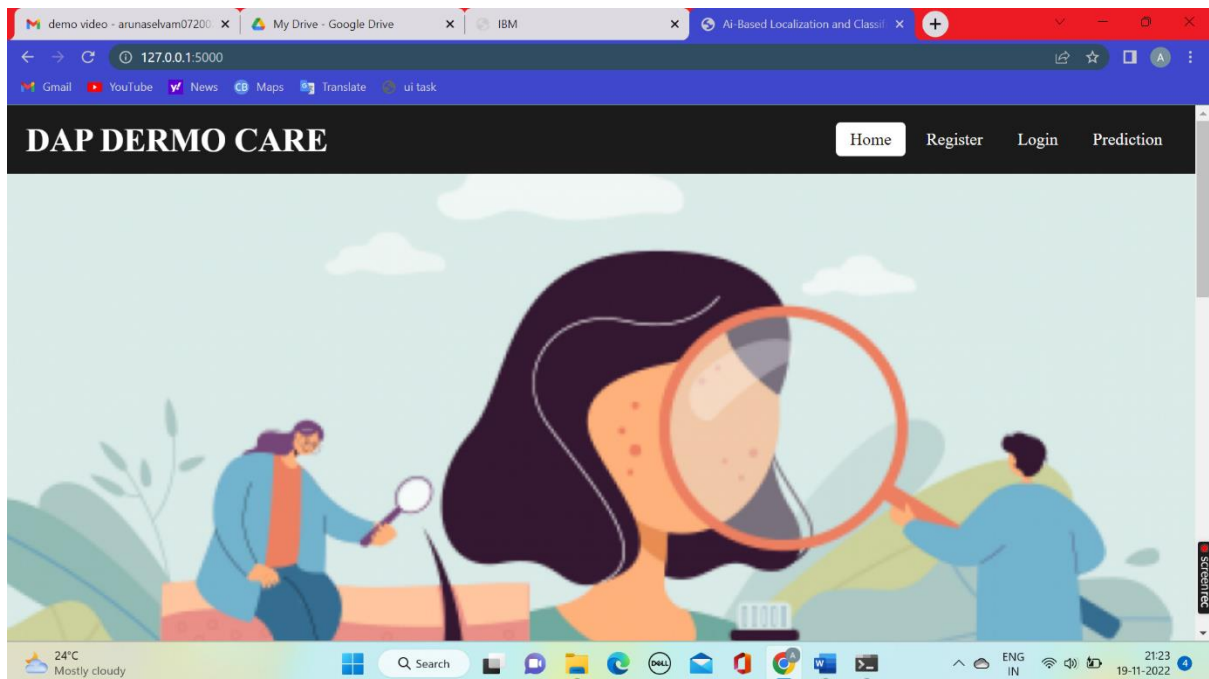


RUN THE APPLICATION

Running app.py file in anaconda prompt:

```
Anaconda Prompt (Anaconda) x + -
(base) C:\Users\aruna>conda activate yolo_env
(yolo_env) C:\Users\aruna>cd C:\Users\aruna\OneDrive\Desktop\AI-based localization and classification of skin disease with erythema
(yolo_env) C:\Users\aruna\OneDrive\Desktop\AI-based localization and classification of skin disease with erythema>python app.py
C:\Users\aruna\OneDrive\Desktop\yolo_structure\2_Training\src
C:\Users\aruna\OneDrive\Desktop\yolo_structure\Utils
Using TensorFlow backend.
* Serving Flask app 'app' (lazy loading)
* Environment: production
  WARNING: This is a development server. Do not use it in a production deployment.
  Use a production WSGI server instead.
* Debug mode: on
WARNING: Logging before flag parsing goes to stderr.
I1119 21:22:20.266508 17332 _internal.py:224] WARNING: This is a development server. Do not use it in a production deployment. Use a
production WSGI server instead.
* Running on http://127.0.0.1:5000
I1119 21:22:20.266508 17332 _internal.py:224] Press CTRL+C to quit
I1119 21:22:20.297857 17332 _internal.py:224] * Restarting with stat
C:\Users\aruna\OneDrive\Desktop\yolo_structure\2_Training\src
C:\Users\aruna\OneDrive\Desktop\yolo_structure\Utils
Using TensorFlow backend.
WARNING: Logging before flag parsing goes to stderr.
W1119 21:22:49.882300 20992 _internal.py:224] * Debugger is active!
I1119 21:22:49.961567 20992 _internal.py:224] * Debugger PIN: 860-391-347
I1119 21:23:21.929130 18240 _internal.py:224] 127.0.0.1 -- [19/Nov/2022 21:23:21] "GET / HTTP/1.1" 200 -
I1119 21:23:21.931122 11384 _internal.py:224] 127.0.0.1 -- [19/Nov/2022 21:23:21] "GET / HTTP/1.1" 200 -
I1119 21:23:21.933477 788 _internal.py:224] 127.0.0.1 -- [19/Nov/2022 21:23:21] "GET / HTTP/1.1" 200 -
I1119 21:23:22.365116 8348 _internal.py:224] 127.0.0.1 -- [19/Nov/2022 21:23:22] "GET /favicon.ico HTTP/1.1" 404 -
I1119 21:23:40.176064 20472 _internal.py:224] 127.0.0.1 -- [19/Nov/2022 21:23:40] "GET / HTTP/1.1" 200 -
I1119 21:23:41.064591 13904 _internal.py:224] 127.0.0.1 -- [19/Nov/2022 21:23:41] "GET / HTTP/1.1" 200 -
```

It will take you to the localhost link <http://127.0.0.1:5000>. Then open this link in the browser.



demo video - arunasevram07200 x My Drive - Google Drive x IBM x Ai-Based Localization and Classifi x +

127.0.0.1:5000

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DAP DERMO CARE

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About Project

Problem

Now a day's people are suffering from skin diseases. More than 125 million people suffering from Psoriasis also skin cancer rate is rapidly increasing over the last few decades especially Melanoma is most diversifying skin cancer. If skin diseases are not treated at an earlier stage, then it may lead to many complications in the body including spreading of the infection from one individual to the other. The skin diseases can be prevented by investigating the infected region at an early stage. The characteristic of the skin images is diversified so that it is a challenging job to devise an efficient and robust algorithm for automatic detection of skin disease and its severity. Skin tone and skin colour play an important role in skin disease detection. Colour and coarseness of skin are visually different. Automatic processing of such images for skin analysis requires quantitative discriminator to differentiate the diseases.

Solution

To overcome the above problem we are building a model which is used for the prevention and early detection of skin cancer, psoriasis. Basically, skin disease diagnosis depends on the different characteristics like colour, shape, texture etc. Here the person can capture the images of skin and then the image will be sent the trained model. The model analyses the image and detect whether the person is having skin disease or not. The trained yolo model detects the disease with accuracy. Our model uses visual object tagging tool to detect the affected area of the skin. Melanoma is one of the most emerging skin problems that are arising in India nowadays. To overcome this problem, we are building the model that detects the disease with high accuracy. Our model classifies three types of skin diseases such as melanoma, psoriasis and rosacea.

24°C Mostly cloudy

Q Search

ENG IN

21:23 19-11-2022

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127.0.0.1:5000

Gmail YouTube News Maps Translate ui task


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We Classify

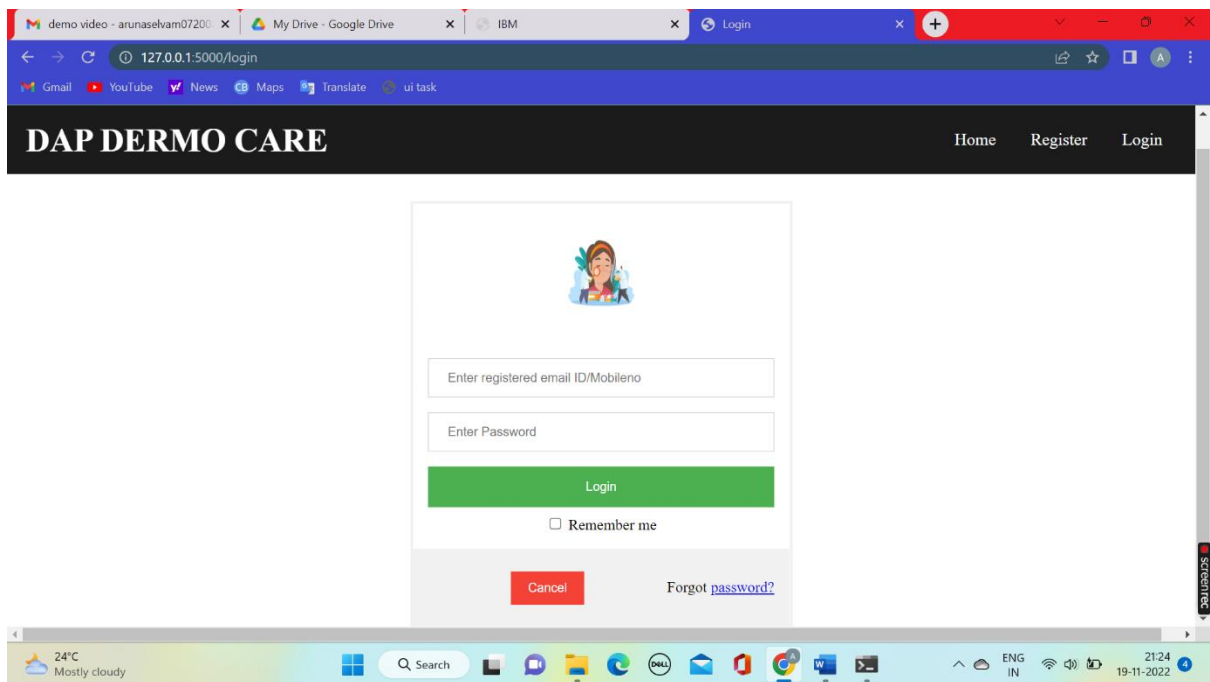
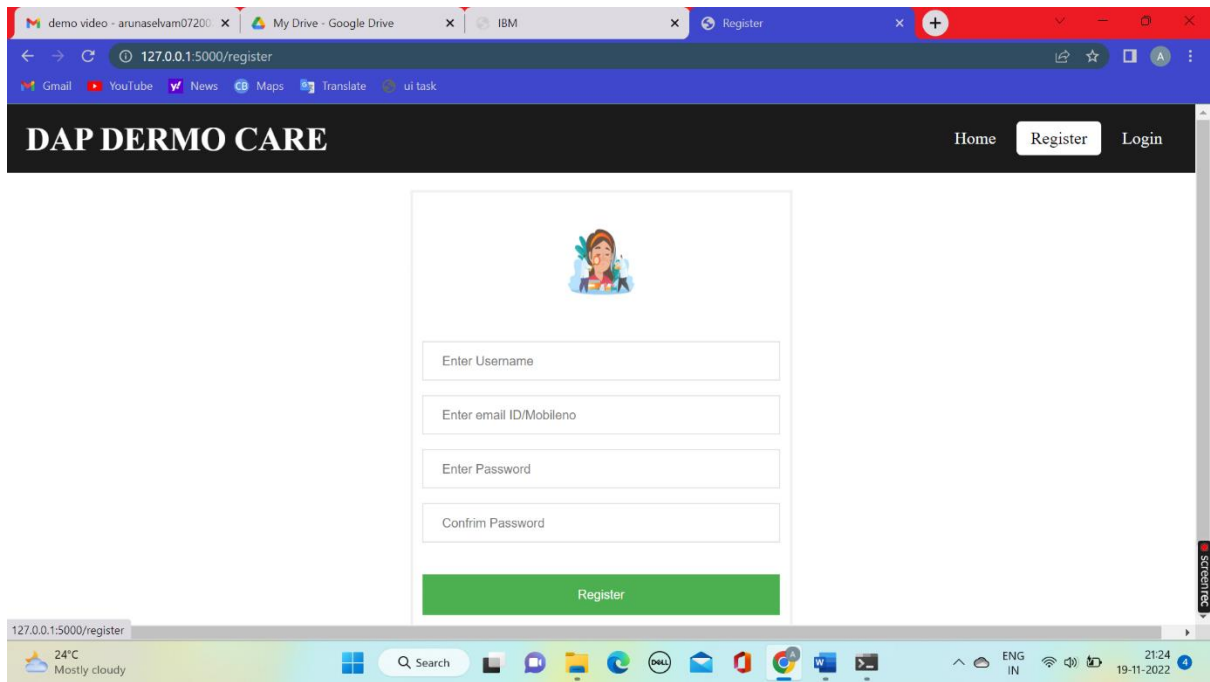


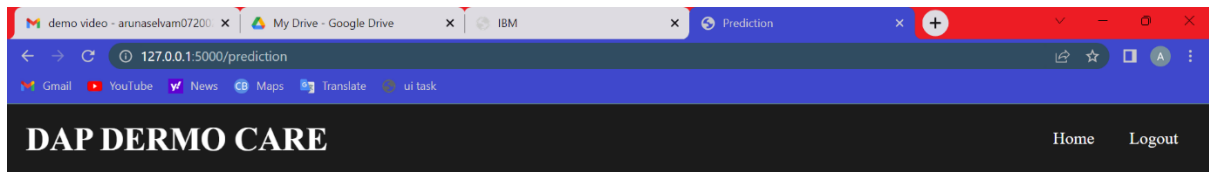
24°C Mostly cloudy

Q Search

ENG IN

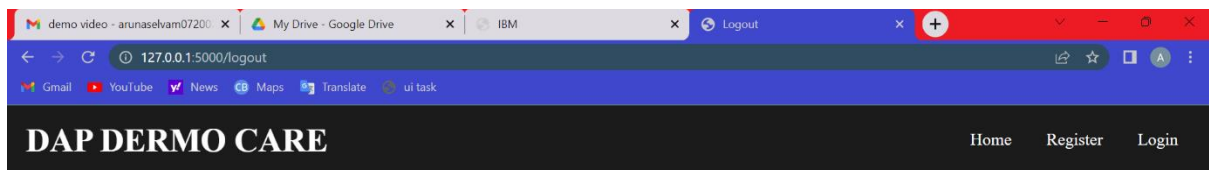
21:23 19-11-2022





DAP DERMO CARE - AI based localization and classification of skin disease with erythema

Now a day's people are suffering from skin diseases, More than 125 million people suffering from Psoriasis also skin cancer rate is rapidly increasing over the last few decades especially Melanoma is most diversifying skin cancer. If skin diseases are not treated at an earlier stage, then it may lead to complications in the body including spreading of the infection from one individual to the other. The skin diseases can be prevented by investigating the infected region at an early stage. The characteristic of the skin images is diversified so that it is a challenging job to devise an efficient and robust algorithm for automatic detection of skin disease and its severity. Skin tone and skin colour play an important role in skin disease detection. Colour and coarseness of skin are visually different. Automatic processing of such images for skin analysis requires quantitative discriminator to differentiate the diseases.



Successfully Logged Out

Login for more information

Login

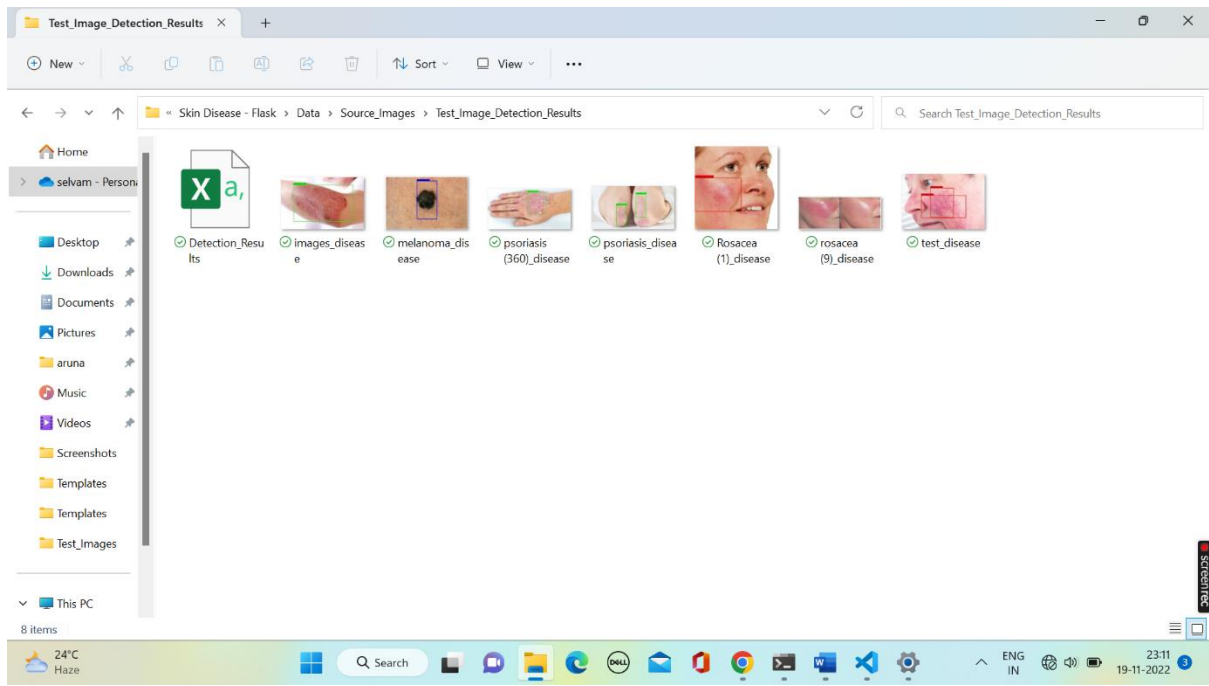


Output:

```
Anaconda Prompt (Anaconda) X + -
C:\Users\aruna\OneDrive\Desktop\yolo_structure\Data\Model_Weights\trained_weights_final.h5 model, anchors, and classes loaded in 38.4
3sec.
W1119 23:04:46.119661 8620 deprecation.py:323] From C:\Users\aruna\AppData\Roaming\Python\Python37\site-packages\tensorflow_core\pyt
hon\ops\array_ops.py:1475: where (from tensorflow.python.ops.array_ops) is deprecated and will be removed in a future version.
Instructions for updating:
Use tf.where in 2.0, which has the same broadcast rule as np.where
Found 3 input labels: ['melanoma', 'psoriasis', 'rosacea'] ...
Found 7 input images: ['images.jpg', 'melanoma.png', 'psoriasis (360).jpg', 'psoriasis.jpg', 'Rosacea (1).jpg'] ...
C:\Users\aruna\OneDrive\Desktop\yolo_structure\Data\Source_Images\Test_Images\images.jpg
(416, 416, 3)
Found 1 boxes for img
psoriasis 0.26 (43, 27) (245, 152)
Time spent: 7.407sec
32.350771556591255 24.468661573704708
C:\Users\aruna\OneDrive\Desktop\yolo_structure\Data\Source_Images\Test_Images\melanoma.png
(416, 416, 3)
Found 1 boxes for img
melanoma 0.70 (362, 56) (589, 486)
Time spent: 2.155sec
4.117602494991928 -166.72297042952198
C:\Users\aruna\OneDrive\Desktop\yolo_structure\Data\Source_Images\Test_Images\psoriasis (360).jpg
(416, 416, 3)
Found 1 boxes for img
psoriasis 0.77 (368, 35) (535, 233)
Time spent: 2.455sec
-86.84180341229024 122.32280460890752
C:\Users\aruna\OneDrive\Desktop\yolo_structure\Data\Source_Images\Test_Images\psoriasis.jpg
(416, 416, 3)
Found 2 boxes for img
psoriasis 0.56 (646, 119) (788, 460)
psoriasis 0.75 (361, 281) (508, 585)
Time spent: 2.604sec
```

```
Anaconda Prompt (Anaconda) X + -
Found 1 boxes for img
psoriasis 0.77 (368, 35) (535, 233)
Time spent: 2.455sec
-86.84180341229024 122.32280460890752
C:\Users\aruna\OneDrive\Desktop\yolo_structure\Data\Source_Images\Test_Images\psoriasis.jpg
(416, 416, 3)
Found 2 boxes for img
psoriasis 0.56 (646, 119) (788, 460)
psoriasis 0.75 (361, 281) (508, 585)
Time spent: 2.604sec
1.996386931393232 177.50780858851647
C:\Users\aruna\OneDrive\Desktop\yolo_structure\Data\Source_Images\Test_Images\Rosacea (1).jpg
(416, 416, 3)
Found 1 boxes for img
rosacea 0.32 (0, 160) (235, 331)
Time spent: 2.484sec
-21.062168817304013 39.41739339044824
C:\Users\aruna\OneDrive\Desktop\yolo_structure\Data\Source_Images\Test_Images\rosacea (9).jpg
(416, 416, 3)
Found 0 boxes for img
Time spent: 2.850sec
-16.243619083105173 -156.07862861420557
C:\Users\aruna\OneDrive\Desktop\yolo_structure\Data\Source_Images\Test_Images\test.jpg
(416, 416, 3)
Found 2 boxes for img
rosacea 0.26 (276, 134) (502, 422)
rosacea 0.77 (188, 206) (621, 427)
Time spent: 2.568sec
-3.1400336406997695 63.02774184831782
Processed 7 images in 24.8sec - 0.3FPS
I1119 23:05:12.218113 8620 _internal.py:224] 127.0.0.1 -- [19/Nov/2022 23:05:12] "POST /result HTTP/1.1" 200 -
```


Test Image Results Folder:



Detection.csv file:

Excel spreadsheet titled 'Detection.Results - Excel'. The data is as follows:

image	image_path	xmin	ymin	xmax	ymax	label	confidence	x_size	y_size
images.jpg	C:\Users\selvam\...	43	27	245	152	1	0.260834	282	179
melanoma.jpg	C:\Users\selvam\...	362	56	589	486	0	0.695725	921	597
psoriasis (360).jpg	C:\Users\selvam\...	368	35	535	233	1	0.774488	764	375
psoriasis.jpg	C:\Users\selvam\...	646	119	788	460	1	0.557531	1200	630
psoriasis.jpg	C:\Users\selvam\...	361	281	508	585	1	0.751215	1200	630
Rosacea (1).jpg	C:\Users\selvam\...	0	160	235	331	2	0.324702	420	420
test.jpg	C:\Users\selvam\...	276	134	502	422	2	0.26349	800	534
test.jpg	C:\Users\selvam\...	188	206	621	427	2	0.770384	800	534

The taskbar at the bottom shows the system clock as 23:11 on 19-11-2022.

Detected Images:

