HARVEST HUB

BY FARMERS FOR FARMERS

ST1516
NAME: RYAN YEO
CLASS: DAAA/FT/2B/01
ADMIN NUMBER: P2214452

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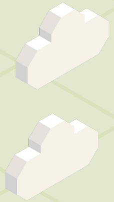
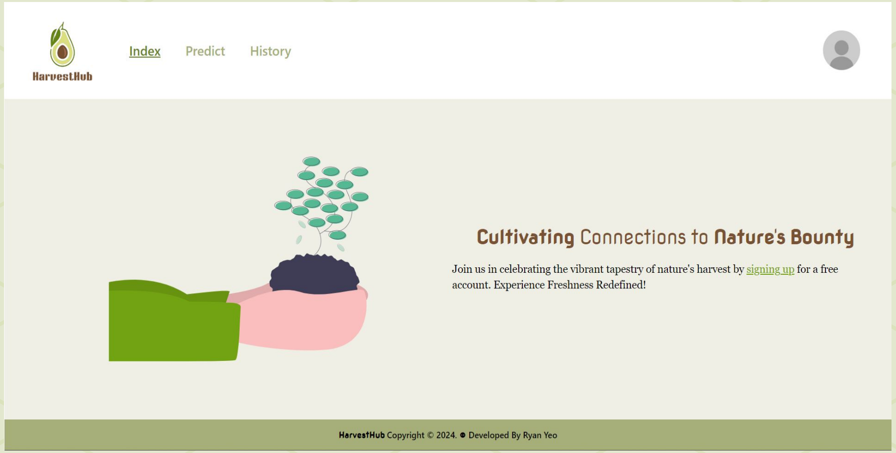
1. APPLICATION

APPLICATION





HarvestHub

Index Predict History

Cultivating Connections to Nature's Bounty

Join us in celebrating the vibrant tapestry of nature's harvest by signing up for a free account. Experience Freshness Redefined!

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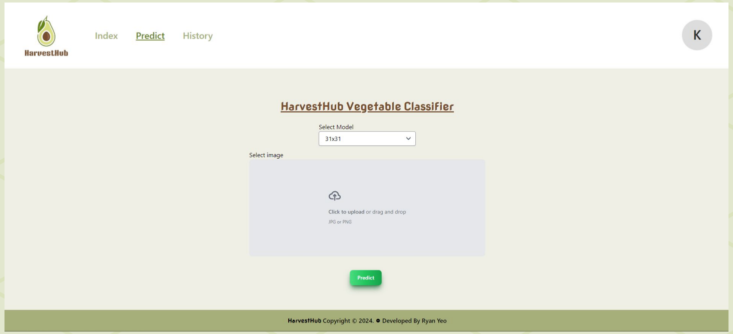
Prediction Page



HarvestHub Vegetable Classifier

Select Model

31x31

Select image

Click to upload or drag and drop

JPG or PNG

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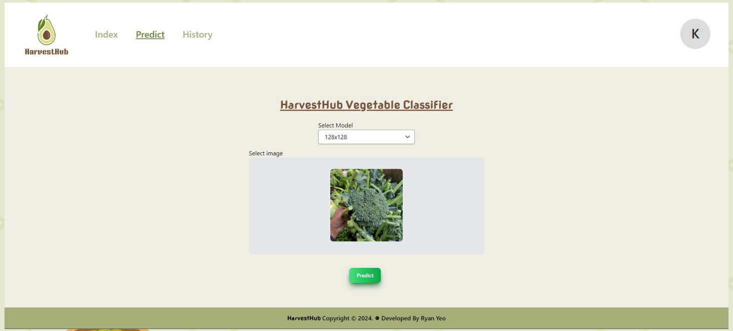

HarvestHub Vegetable Classifier

Select Model

128x128

Select image

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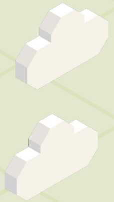
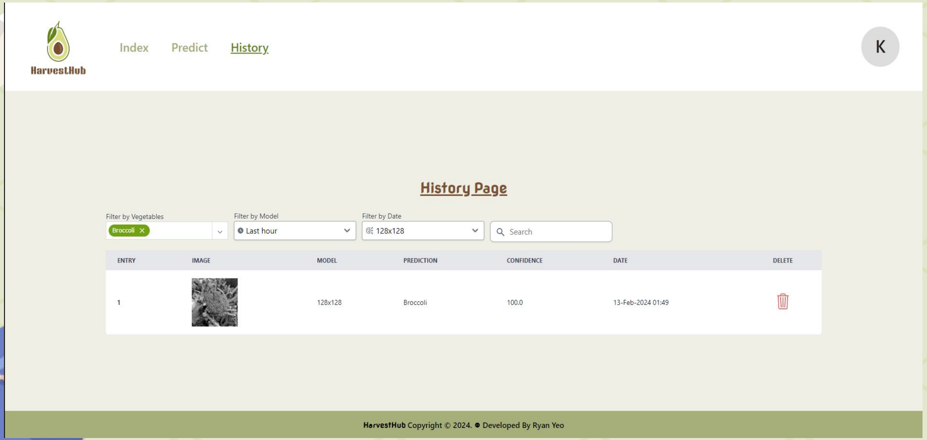
Choose between 31x31 and 128x128 model

Input Image to be classified as 1 of 15 vegetable classes



History Page



History Page

Filter by Vegetables: Broccoli
Filter by Model: Last hour
Filter by Date: 128x128
Search

ENTRY	IMAGE	MODEL	PREDICTION	CONFIDENCE	DATE	DELETE
1		128x128	Broccoli	100.0	13-Feb-2024 01:49	

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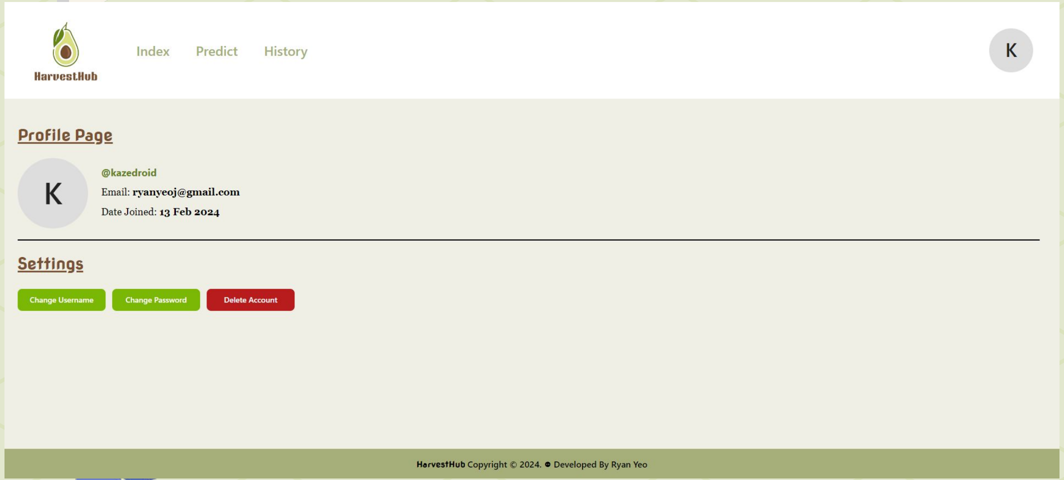
Display Predictions made by user
Filter by:

- **Vegetable (MultiSelect)**
- **Date**
- **Model**
- **Search Bar (any column)**

Profile Page



Profile Page

@kazedroid

Email: ryanyeoj@gmail.com

Date Joined: 13 Feb 2024

Settings

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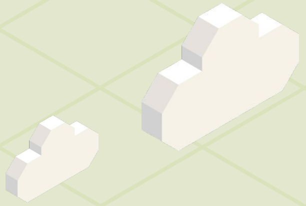
Display username, email and date joined

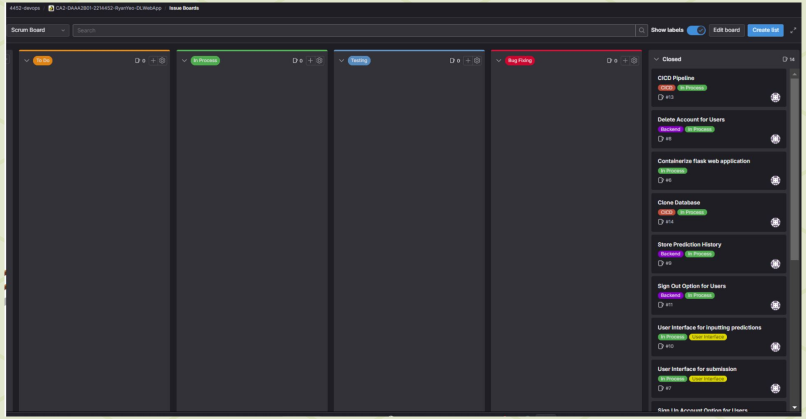
Allow user to change username, change password and delete account



2.

Devops process

SETTING UP



4452-devops / CA2-DAAA2B01-2214452-RyanYeo-DLWebApp / Issue Boards

Scrum Board | Search | Show labels | Edit board | Create list

To Do	In Process	Testing	Bug Fixing	Closed
0	0	0	0	14

Closed:

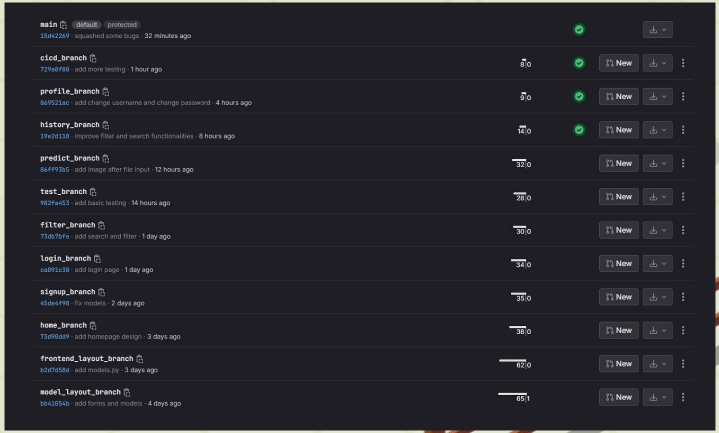
- CICD Pipeline — CICD, In Process — #13
- Delete Account for Users — Backend, In Process — #8
- Containerize flask web application — In Process — #6
- Clone Database — CICD, In Process — #14
- Store Prediction History — Backend, In Process — #9
- Sign Out Option for Users — Backend, In Process — #11
- User Interface for inputting predictions — In Process, User Interface — #10
- User Interface for submission — In Process, User Interface — #7
- Sign Up Account Option for Users

Use of Scrum Board:

- Use of Scrum Board
- Helps Keep track of application development
- Different sections: To Do, In Progress, Testing & Bug Fixing

Use of Git Branches:

- Makes changes to the folder in a controlled environment
- Total of 15 branches (3 for Model App, 12 for Web App)

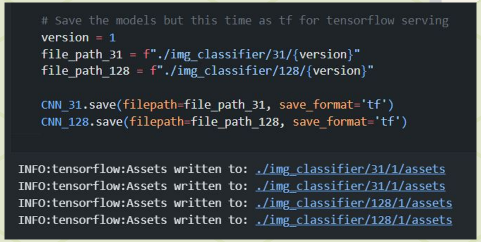


```
main  default  protected
15d42269 · squashed some bugs · 32 minutes ago
cicd_branch                                                        8|0
729a8f80 · add more testing · 1 hour ago
profile_branch                                                     9|0
869521ac · add change username and change password · 4 hours ago
history_branch                                                    14|0
19e2d110 · improve filter and search functionalities · 8 hours ago
predict_branch                                                    32|0
86ff93b5 · add image after file input · 12 hours ago
test_branch                                                       28|0
982fa453 · add basic testing · 14 hours ago
filter_branch                                                     30|0
73db7bfe · add search and filter · 1 day ago
login_branch                                                      34|0
ca891c38 · add login page · 1 day ago
signup_branch                                                     35|0
45de4f98 · fix models · 2 days ago
home_branch                                                       38|0
73d90dd9 · add homepage design · 3 days ago
frontend_layout_branch                                            62|0
b2d7d58d · add models.py · 3 days ago
model_layout_branch                                               65|1
bb41054b · add forms and models · 4 days ago
```

MODEL DEPLOYMENT

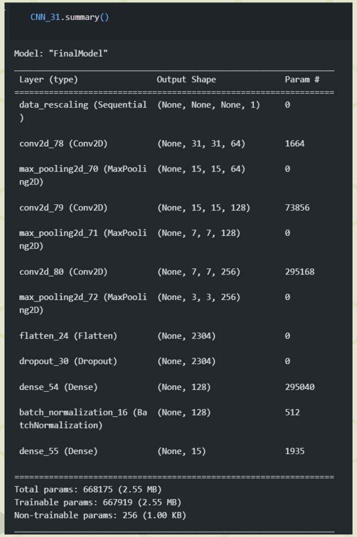
Save Models:

- Save two models (one handling 31x31 images and another handling 128x128 images) in ‘tf’ format for tensorflow serving



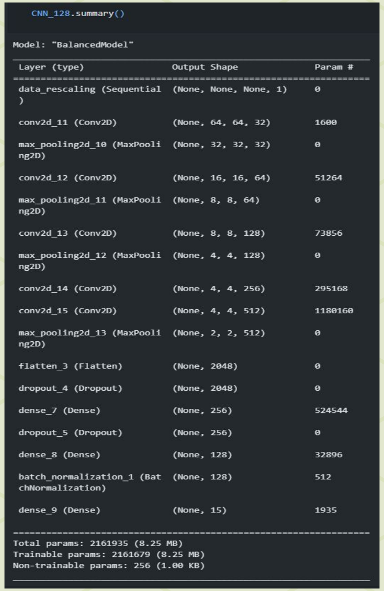
```
# Save the models but this time as tf for tensorflow serving
version = 1
file_path_31 = f"./img_classifier/31/{version}"
file_path_128 = f"./img_classifier/128/{version}"

CNN_31.save(filepath=file_path_31, save_format='tf')
CNN_128.save(filepath=file_path_128, save_format='tf')
```

```
INFO:tensorflow:Assets written to: ./img_classifier/31/1/assets
INFO:tensorflow:Assets written to: ./img_classifier/31/1/assets
INFO:tensorflow:Assets written to: ./img_classifier/128/1/assets
INFO:tensorflow:Assets written to: ./img_classifier/128/1/assets
```



```
CNN_31.summary()
```

```
Model: "FinalModel"
_________________________________________________________________
 Layer (type)                Output Shape              Param #
=================================================================
 data_rescaling (Sequential  (None, None, None, 1)     0
 )

 conv2d_78 (Conv2D)          (None, 31, 31, 64)        1664

 max_pooling2d_70 (MaxPooli  (None, 15, 15, 64)        0
 ng2D)

 conv2d_79 (Conv2D)          (None, 15, 15, 128)       73856

 max_pooling2d_71 (MaxPooli  (None, 7, 7, 128)         0
 ng2D)

 conv2d_80 (Conv2D)          (None, 7, 7, 256)         295168

 max_pooling2d_72 (MaxPooli  (None, 3, 3, 256)         0
 ng2D)

 flatten_24 (Flatten)        (None, 2304)              0

 dropout_30 (Dropout)        (None, 2304)              0

 dense_54 (Dense)            (None, 128)               295040

 batch_normalization_16 (Ba  (None, 128)               512
 tchNormalization)

 dense_55 (Dense)            (None, 15)                1935

=================================================================
Total params: 668175 (2.55 MB)
Trainable params: 667919 (2.55 MB)
Non-trainable params: 256 (1.00 KB)
_________________________________________________________________
```



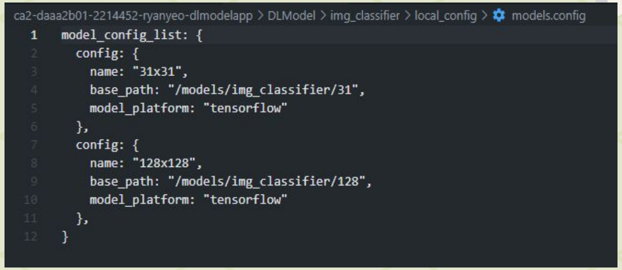
```
CNN_128.summary()
```

```
Model: "BalancedModel"
_________________________________________________________________
 Layer (type)                Output Shape              Param #
=================================================================
 data_rescaling (Sequential  (None, None, None, 1)     0
 )

 conv2d_11 (Conv2D)          (None, 64, 64, 32)        1600

 max_pooling2d_10 (MaxPooli  (None, 32, 32, 32)        0
 ng2D)

 conv2d_12 (Conv2D)          (None, 16, 16, 64)        51264

 max_pooling2d_11 (MaxPooli  (None, 8, 8, 64)          0
 ng2D)

 conv2d_13 (Conv2D)          (None, 8, 8, 128)         73856

 max_pooling2d_12 (MaxPooli  (None, 4, 4, 128)         0
 ng2D)

 conv2d_14 (Conv2D)          (None, 4, 4, 256)         295168

 conv2d_15 (Conv2D)          (None, 4, 4, 512)         1180160

 max_pooling2d_13 (MaxPooli  (None, 2, 2, 512)         0
 ng2D)

 flatten_3 (Flatten)         (None, 2048)              0

 dropout_4 (Dropout)         (None, 2048)              0

 dense_7 (Dense)             (None, 256)               524544

 dropout_5 (Dropout)         (None, 256)               0

 dense_8 (Dense)             (None, 128)               32896

 batch_normalization_1 (Bat  (None, 128)               512
 chNormalization)

 dense_9 (Dense)             (None, 15)                1935

=================================================================
Total params: 2161935 (8.25 MB)
Trainable params: 2161679 (8.25 MB)
Non-trainable params: 256 (1.00 KB)
_________________________________________________________________
```

MODEL SERVING

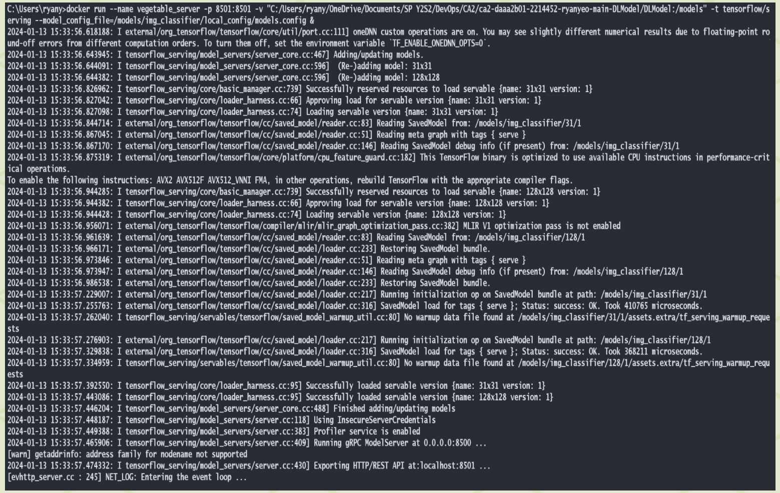
LOCAL DEPLOYMENT:

- Before deploying the model on render, test local deployment
- Use models.config file to serve both models under the same container



ca2-daaa2b01-2214452-ryanyeo-dlmodelapp > DLModel > img_classifier > local_config > models.config

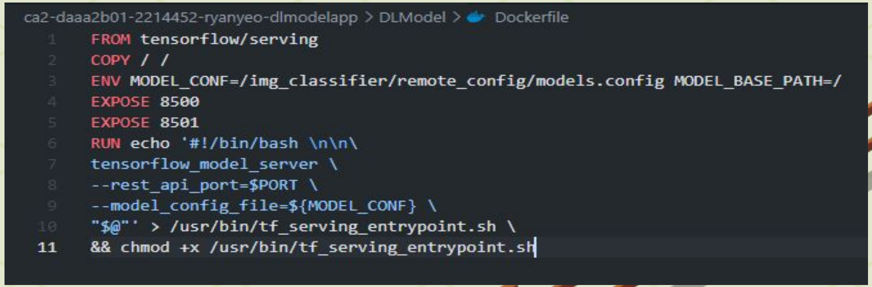
```
model_config_list: {
  config: {
    name: "31x31",
    base_path: "/models/img_classifier/31",
    model_platform: "tensorflow"
  },
  config: {
    name: "128x128",
    base_path: "/models/img_classifier/128",
    model_platform: "tensorflow"
  },
}
```



```
C:\Users\ryany>docker run --name vegetable_server -p 8501:8501 -v "C:/Users/ryany/OneDrive/Documents/SP Y2S2/DevOps/CA2/ca2-daaa2b01-2214452-ryanyeo-main-DLModel/DLModel:/models" -t tensorflow/s
erving --model_config_file=/models/img_classifier/local_config/models.config &
2024-01-13 15:33:56.618188: I external/org_tensorflow/tensorflow/core/util/port.cc:111] oneDNN custom operations are on. You may see slightly different numerical results due to floating-point ro
und-off errors from different computation orders. To turn them off, set the environment variable `TF_ENABLE_ONEDNN_OPTS=0`.
2024-01-13 15:33:56.643945: I tensorflow_serving/model_servers/server_core.cc:467] Adding/updating models.
2024-01-13 15:33:56.644091: I tensorflow_serving/model_servers/server_core.cc:596]  (Re-)adding model: 31x31
2024-01-13 15:33:56.644382: I tensorflow_serving/model_servers/server_core.cc:596]  (Re-)adding model: 128x128
2024-01-13 15:33:56.826962: I tensorflow_serving/core/basic_manager.cc:739] Successfully reserved resources to load servable {name: 31x31 version: 1}
2024-01-13 15:33:56.827042: I tensorflow_serving/core/loader_harness.cc:66] Approving load for servable version {name: 31x31 version: 1}
2024-01-13 15:33:56.827098: I tensorflow_serving/core/loader_harness.cc:74] Loading servable version {name: 31x31 version: 1}
2024-01-13 15:33:56.844714: I external/org_tensorflow/tensorflow/cc/saved_model/reader.cc:83] Reading SavedModel from: /models/img_classifier/31/1
2024-01-13 15:33:56.867045: I external/org_tensorflow/tensorflow/cc/saved_model/reader.cc:51] Reading meta graph with tags { serve }
2024-01-13 15:33:56.867170: I external/org_tensorflow/tensorflow/cc/saved_model/reader.cc:146] Reading SavedModel debug info (if present) from: /models/img_classifier/31/1
2024-01-13 15:33:56.875319: I external/org_tensorflow/tensorflow/core/platform/cpu_feature_guard.cc:182] This TensorFlow binary is optimized to use available CPU instructions in performance-crit
ical operations.
To enable the following instructions: AVX2 AVX512F AVX512_VNNI FMA, in other operations, rebuild TensorFlow with the appropriate compiler flags.
2024-01-13 15:33:56.944285: I tensorflow_serving/core/basic_manager.cc:739] Successfully reserved resources to load servable {name: 128x128 version: 1}
2024-01-13 15:33:56.944382: I tensorflow_serving/core/loader_harness.cc:66] Approving load for servable version {name: 128x128 version: 1}
2024-01-13 15:33:56.944428: I tensorflow_serving/core/loader_harness.cc:74] Loading servable version {name: 128x128 version: 1}
2024-01-13 15:33:56.956071: I external/org_tensorflow/tensorflow/compiler/mlir/mlir_graph_optimization_pass.cc:382] MLIR V1 optimization pass is not enabled
2024-01-13 15:33:56.961639: I external/org_tensorflow/tensorflow/cc/saved_model/reader.cc:83] Reading SavedModel from: /models/img_classifier/128/1
2024-01-13 15:33:56.966171: I external/org_tensorflow/tensorflow/cc/saved_model/loader.cc:233] Restoring SavedModel bundle.
2024-01-13 15:33:56.973846: I external/org_tensorflow/tensorflow/cc/saved_model/reader.cc:51] Reading meta graph with tags { serve }
2024-01-13 15:33:56.973947: I external/org_tensorflow/tensorflow/cc/saved_model/reader.cc:146] Reading SavedModel debug info (if present) from: /models/img_classifier/128/1
2024-01-13 15:33:56.986538: I external/org_tensorflow/tensorflow/cc/saved_model/loader.cc:233] Restoring SavedModel bundle.
2024-01-13 15:33:57.229007: I external/org_tensorflow/tensorflow/cc/saved_model/loader.cc:217] Running initialization op on SavedModel bundle at path: /models/img_classifier/31/1
2024-01-13 15:33:57.255763: I external/org_tensorflow/tensorflow/cc/saved_model/loader.cc:316] SavedModel load for tags { serve }; Status: success: OK. Took 410765 microseconds.
2024-01-13 15:33:57.262040: I tensorflow_serving/servables/tensorflow/saved_model_warmup_util.cc:80] No warmup data file found at /models/img_classifier/31/1/assets.extra/tf_serving_warmup_reque
sts
2024-01-13 15:33:57.276903: I external/org_tensorflow/tensorflow/cc/saved_model/loader.cc:217] Running initialization op on SavedModel bundle at path: /models/img_classifier/128/1
2024-01-13 15:33:57.329838: I external/org_tensorflow/tensorflow/cc/saved_model/loader.cc:316] SavedModel load for tags { serve }; Status: success: OK. Took 368211 microseconds.
2024-01-13 15:33:57.334959: I tensorflow_serving/servables/tensorflow/saved_model_warmup_util.cc:80] No warmup data file found at /models/img_classifier/128/1/assets.extra/tf_serving_warmup_requ
ests
2024-01-13 15:33:57.392550: I tensorflow_serving/core/loader_harness.cc:95] Successfully loaded servable version {name: 31x31 version: 1}
2024-01-13 15:33:57.443086: I tensorflow_serving/core/loader_harness.cc:95] Successfully loaded servable version {name: 128x128 version: 1}
2024-01-13 15:33:57.446204: I tensorflow_serving/model_servers/server_core.cc:488] Finished adding/updating models
2024-01-13 15:33:57.448187: I tensorflow_serving/model_servers/server.cc:118] Using InsecureServerCredentials
2024-01-13 15:33:57.449388: I tensorflow_serving/model_servers/server.cc:383] Profiler service is enabled
2024-01-13 15:33:57.465906: I tensorflow_serving/model_servers/server.cc:409] Running gRPC ModelServer at 0.0.0.0:8500 ...
[warn] getaddrinfo: address family for nodename not supported
2024-01-13 15:33:57.474332: I tensorflow_serving/model_servers/server.cc:430] Exporting HTTP/REST API at:localhost:8501 ...
[evhttp_server.cc : 245] NET_LOG: Entering the event loop ...
```

REMOTE DEPLOYMENT:

- Similar to Local Deployment
- Use of dockerfile instead of running docker in cli
- Deploy on render to host the container containing both models



ca2-daaa2b01-2214452-ryanyeo-dlmodelapp > DLModel > Dockerfile

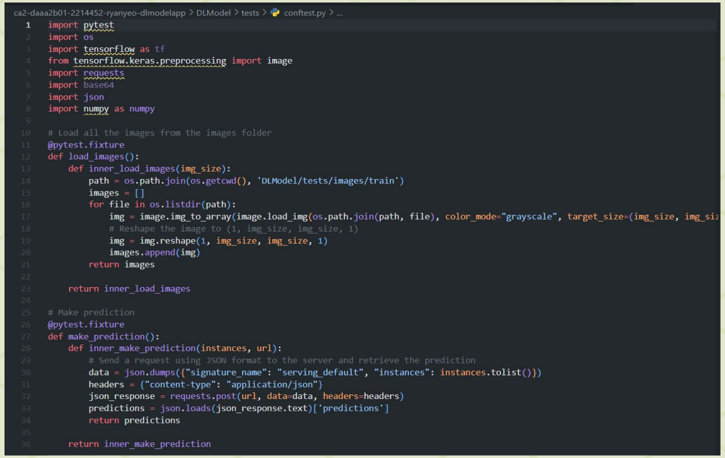
```
FROM tensorflow/serving
COPY / /
ENV MODEL_CONF=/img_classifier/remote_config/models.config MODEL_BASE_PATH=/
EXPOSE 8500
EXPOSE 8501
RUN echo '#!/bin/bash \n\n\
tensorflow_model_server \
--rest_api_port=$PORT \
--model_config_file=${MODEL_CONF} \
"$@"' > /usr/bin/tf_serving_entrypoint.sh \
&& chmod +x /usr/bin/tf_serving_entrypoint.sh
```

TEST MODEL

TESTING:

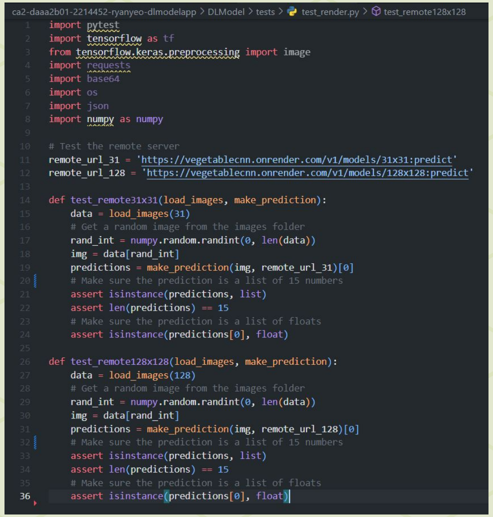
- Testing includes testing for both local deployment and remote deployment
- Test that model returns a list of 15 floats (probabilities)

CONFTEST.PY



ca2-daaa2b01-2214452-ryanyeo-dlmodelapp > DLModel > tests > conftest.py > ...

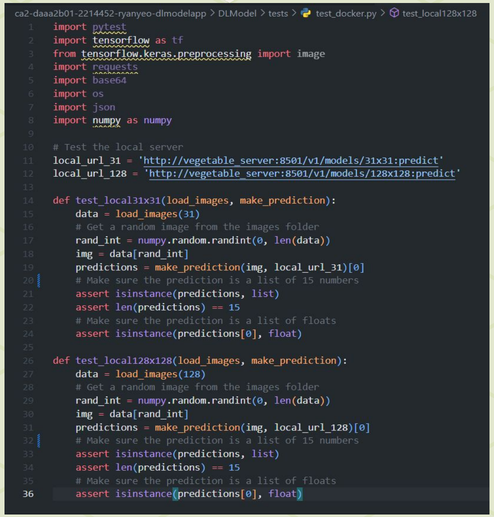
```python
import pytest
import os
import tensorflow as tf
from tensorflow.keras.preprocessing import image
import requests
import base64
import json
import numpy as numpy

# Load all the images from the images folder
@pytest.fixture
def load_images():
    def inner_load_images(img_size):
        path = os.path.join(os.getcwd(), 'DLModel/tests/images/train')
        images = []
        for file in os.listdir(path):
            img = image.img_to_array(image.load_img(os.path.join(path, file), color_mode="grayscale", target_size=(img_size, img_siz
            # Reshape the image to (1, img_size, img_size, 1)
            img = img.reshape(1, img_size, img_size, 1)
            images.append(img)
        return images

    return inner_load_images

# Make prediction
@pytest.fixture
def make_prediction():
    def inner_make_prediction(instances, url):
        # Send a request using JSON format to the server and retrieve the prediction
        data = json.dumps({"signature_name": "serving_default", "instances": instances.tolist()})
        headers = {"content-type": "application/json"}
        json_response = requests.post(url, data=data, headers=headers)
        predictions = json.loads(json_response.text)['predictions']
        return predictions

    return inner_make_prediction
```



ca2-daaa2b01-2214452-ryanyeo-dlmodelapp > DLModel > tests > test_render.py > test_remote128x128

```python
import pytest
import tensorflow as tf
from tensorflow.keras.preprocessing import image
import requests
import base64
import os
import json
import numpy as numpy

# Test the remote server
remote_url_31 = 'https://vegetablecnn.onrender.com/v1/models/31x31:predict'
remote_url_128 = 'https://vegetablecnn.onrender.com/v1/models/128x128:predict'

def test_remote31x31(load_images, make_prediction):
    data = load_images(31)
    # Get a random image from the images folder
    rand_int = numpy.random.randint(0, len(data))
    img = data[rand_int]
    predictions = make_prediction(img, remote_url_31)[0]
    # Make sure the prediction is a list of 15 numbers
    assert isinstance(predictions, list)
    assert len(predictions) == 15
    # Make sure the prediction is a list of floats
    assert isinstance(predictions[0], float)

def test_remote128x128(load_images, make_prediction):
    data = load_images(128)
    # Get a random image from the images folder
    rand_int = numpy.random.randint(0, len(data))
    img = data[rand_int]
    predictions = make_prediction(img, remote_url_128)[0]
    # Make sure the prediction is a list of 15 numbers
    assert isinstance(predictions, list)
    assert len(predictions) == 15
    # Make sure the prediction is a list of floats
    assert isinstance(predictions[0], float)
```

REMOTE TEST



ca2-daaa2b01-2214452-ryanyeo-dlmodelapp > DLModel > tests > test_docker.py > test_local128x128

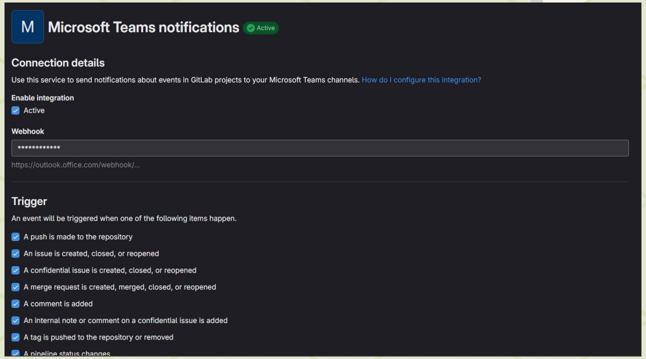
```python
import pytest
import tensorflow as tf
from tensorflow.keras.preprocessing import image
import requests
import base64
import os
import json
import numpy as numpy

# Test the local server
local_url_31 = 'http://vegetable_server:8501/v1/models/31x31:predict'
local_url_128 = 'http://vegetable_server:8501/v1/models/128x128:predict'

def test_local31x31(load_images, make_prediction):
    data = load_images(31)
    # Get a random image from the images folder
    rand_int = numpy.random.randint(0, len(data))
    img = data[rand_int]
    predictions = make_prediction(img, local_url_31)[0]
    # Make sure the prediction is a list of 15 numbers
    assert isinstance(predictions, list)
    assert len(predictions) == 15
    # Make sure the prediction is a list of floats
    assert isinstance(predictions[0], float)

def test_local128x128(load_images, make_prediction):
    data = load_images(128)
    # Get a random image from the images folder
    rand_int = numpy.random.randint(0, len(data))
    img = data[rand_int]
    predictions = make_prediction(img, local_url_128)[0]
    # Make sure the prediction is a list of 15 numbers
    assert isinstance(predictions, list)
    assert len(predictions) == 15
    # Make sure the prediction is a list of floats
    assert isinstance(predictions[0], float)
```

LOCAL TEST

CICD

CICD:

- Continuous Integration:
  - Triggers a series of automated tests when pushed
  - Sends notification about changes and potential issues when pushed
- Continuous Development
  - Deploys to render when pushed



Microsoft Teams notifications Active

Connection details

Use this service to send notifications about events in GitLab projects to your Microsoft Teams channels. How do I configure this integration?

Enable integration

- [✓] Active

Webhook

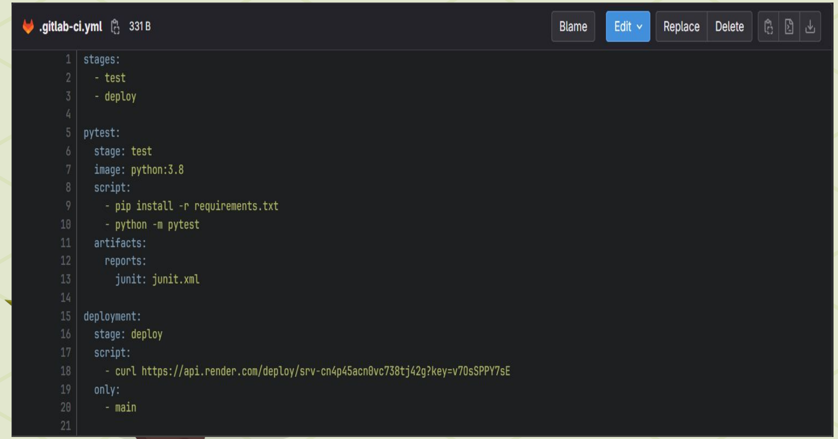
****

https://outlook.office.com/webhook/...

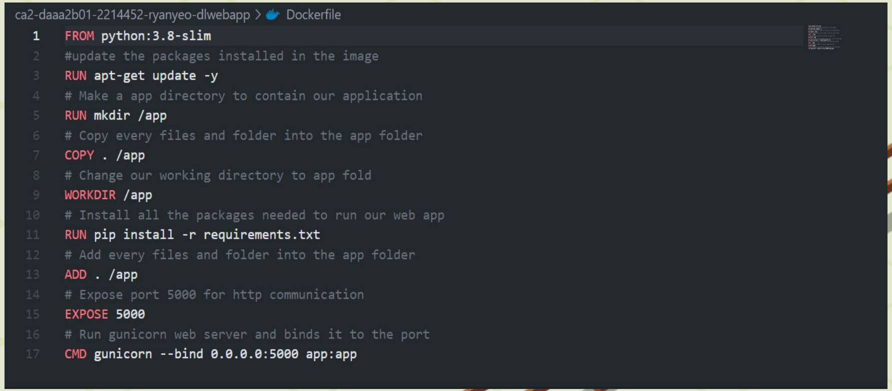
Trigger

An event will be triggered when one of the following items happen.

- [✓] A push is made to the repository
- [✓] An issue is created, closed, or reopened
- [✓] A confidential issue is created, closed, or reopened
- [✓] A merge request is created, merged, closed, or reopened
- [✓] A comment is added
- [✓] An internal note or comment on a confidential issue is added
- [✓] A tag is pushed to the repository or removed
- [✓] A pipeline status changes



```yaml
stages:
  - test
  - deploy

pytest:
  stage: test
  image: python:3.8
  script:
    - pip install -r requirements.txt
    - python -m pytest
  artifacts:
    reports:
      junit: junit.xml

deployment:
  stage: deploy
  script:
    - curl https://api.render.com/deploy/srv-cn4p45acn0vc738tj42g?key=v70sSPPY7sE
  only:
    - main

```



```dockerfile
FROM python:3.8-slim
#update the packages installed in the image
RUN apt-get update -y
# Make a app directory to contain our application
RUN mkdir /app
# Copy every files and folder into the app folder
COPY . /app
# Change our working directory to app fold
WORKDIR /app
# Install all the packages needed to run our web app
RUN pip install -r requirements.txt
# Add every files and folder into the app folder
ADD . /app
# Expose port 5000 for http communication
EXPOSE 5000
# Run gunicorn web server and binds it to the port
CMD gunicorn --bind 0.0.0.0:5000 app:app
```

3.

Testing

REST APIs & Endpoints

Predict:

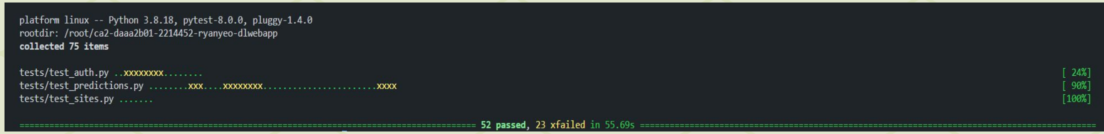
/api/predict: Get prediction from model
/api/predict/store: Store prediction into db
/api/predict/entries: Get prediction from db
/api/predict/filter: Get filtered prediction from db
/api/predict/remove: Removes prediction from db

User:

/api/user/add: Add user to db
/api/user/login: Logs user into the current session
/api/user/remove: Removes user from db
/api/user/changeuser: Updates a user's username in db
/api/user/changepw: Updates a user's password in db

Pages Endpoint:

/
/predict
/history
/profile
/signup
/login



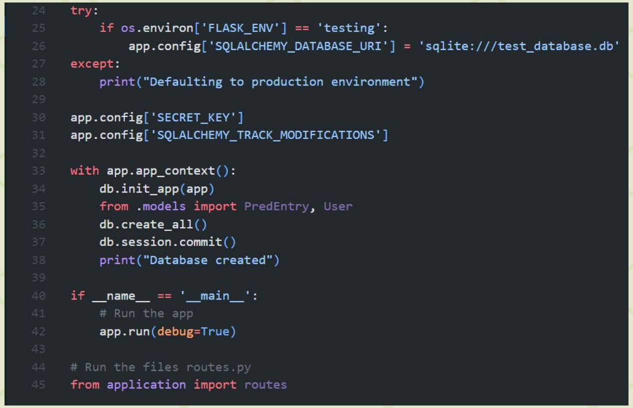
```
platform linux -- Python 3.8.18, pytest-8.0.0, pluggy-1.4.0
rootdir: /root/ca2-daaa2b01-2214452-ryanyeo-dlwebapp
collected 75 items

tests/test_auth.py ..xxxxxxxx.......                                                              [ 24%]
tests/test_predictions.py ........xxx....xxxxxxxx......................xxxx                        [ 90%]
tests/test_sites.py .......                                                                       [100%]

=============================================== 52 passed, 23 xfailed in 55.69s ===============================================
```

Validity Testing verifies that the software behaves correctly under the various conditions and that it produces
Consistency Testing checks if the software produces consistent results under the same conditions
Unexpected Failure Testing is used to identify any issues or bugs that cause the system to fail in unexpected ways.
Expected Failure Testing is used to verify that the software fails correctly

Configure TEST

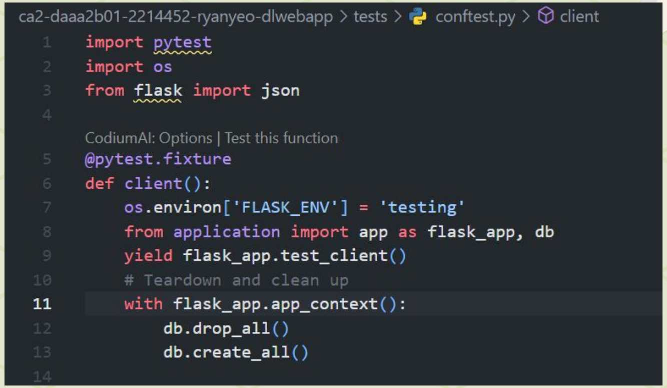
Clone development db:

- Clone development database during testing
- Ensures that development db is not affected during testing
- Teardown and cleanup after every test



```python
try:
    if os.environ['FLASK_ENV'] == 'testing':
        app.config['SQLALCHEMY_DATABASE_URI'] = 'sqlite:///test_database.db'
except:
    print("Defaulting to production environment")

app.config['SECRET_KEY']
app.config['SQLALCHEMY_TRACK_MODIFICATIONS']

with app.app_context():
    db.init_app(app)
    from .models import PredEntry, User
    db.create_all()
    db.session.commit()
    print("Database created")

if __name__ == '__main__':
    # Run the app
    app.run(debug=True)

# Run the files routes.py
from application import routes
```

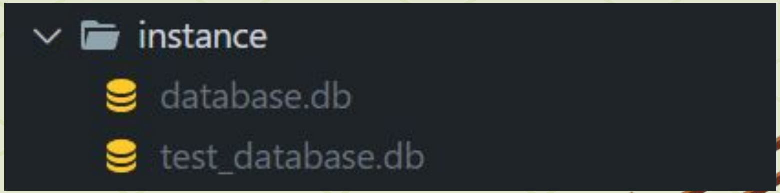
__INIT__.PY



ca2-daaa2b01-2214452-ryanyeo-dlwebapp > tests > conftest.py > client

```python
import pytest
import os
from flask import json

CodiumAI: Options | Test this function
@pytest.fixture
def client():
    os.environ['FLASK_ENV'] = 'testing'
    from application import app as flask_app, db
    yield flask_app.test_client()
    # Teardown and clean up
    with flask_app.app_context():
        db.drop_all()
        db.create_all()
```

CONFTEST.PY



```
instance
    database.db
    test_database.db
```

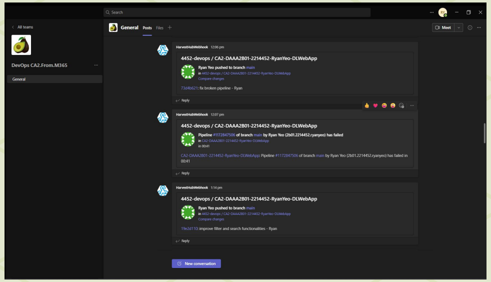
4.

Advanced

Advanced Feature

UiPath

Used UiPath for Robotic Process Automation



HarvestHubWebhook 12:06 pm

4452-devops / CA2-DAAA2B01-2214452-RyanYeo-DLWebApp

Ryan Yeo pushed to branch main
in 4452-devops / CA2-DAAA2B01-2214452-RyanYeo-DLWebApp
Compare changes

73d4b621: fix broken pipeline - Ryan

Reply

HarvestHubWebhook 12:07 pm

4452-devops / CA2-DAAA2B01-2214452-RyanYeo-DLWebApp

Pipeline #1172847506 of branch main by Ryan Yeo (2b01.2214452.ryanyeo) has failed
in CA2-DAAA2B01-2214452-RyanYeo-DLWebApp
in 00:41

CA2-DAAA2B01-2214452-RyanYeo-DLWebApp: Pipeline #1172847506 of branch main by Ryan Yeo (2b01.2214452.ryanyeo) has failed in 00:41

Reply

HarvestHubWebhook 1:14 pm

4452-devops / CA2-DAAA2B01-2214452-RyanYeo-DLWebApp

Ryan Yeo pushed to branch main
in 4452-devops / CA2-DAAA2B01-2214452-RyanYeo-DLWebApp
Compare changes

19e2d110: improve filter and search functionalities - Ryan

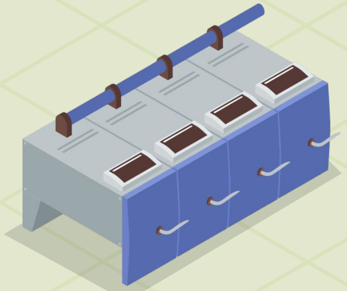
Reply

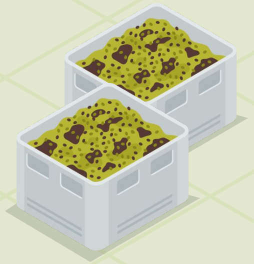
Notification

Integrated Gitlab repository with MSTeams to send a message every time there is a change

Tailwind

Used Tailwind as the main css framework for designing frontend





5.

Robotic Process Automation

Robotic Process Automation

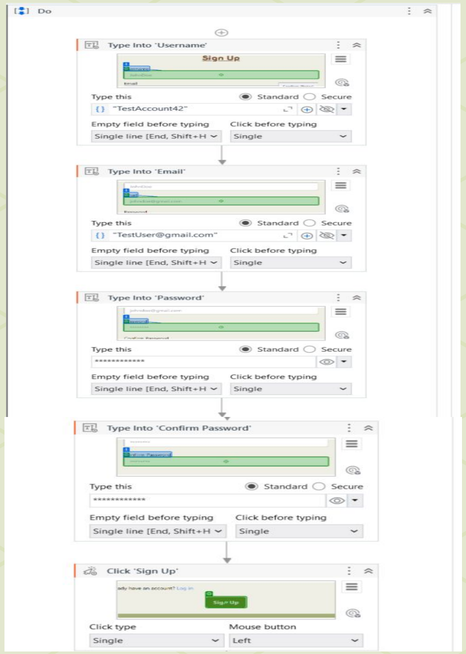
Testing Using RPA:

RPA helps with automation testing automate repetitive manual testing tasks

For testing, we tested:

- Registration
- Login
- Prediction

using UiPath to automate the form filling and UI interaction processes



Do

Type Into 'Username'

Sign Up

Type this (● Standard ○ Secure)

"TestAccount42"

Empty field before typing: Single line [End, Shift+H

Click before typing: Single

Type Into 'Email'

Type this (● Standard ○ Secure)

"TestUser@gmail.com"

Empty field before typing: Single line [End, Shift+H

Click before typing: Single

Type Into 'Password'

Type this (● Standard ○ Secure)

****

Empty field before typing: Single line [End, Shift+H

Click before typing: Single

Type Into 'Confirm Password'

Type this (● Standard ○ Secure)

****

Empty field before typing: Single line [End, Shift+H

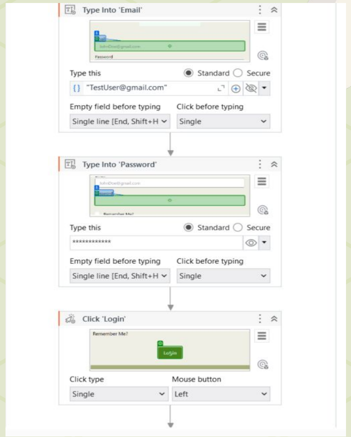
Click before typing: Single

Click 'Sign Up'

Click type: Single

Mouse button: Left

Automate Registration



Type Into 'Email'

Type this (● Standard ○ Secure)

"TestUser@gmail.com"

Empty field before typing: Single line [End, Shift+H

Click before typing: Single

Type Into 'Password'

Type this (● Standard ○ Secure)

****

Empty field before typing: Single line [End, Shift+H

Click before typing: Single

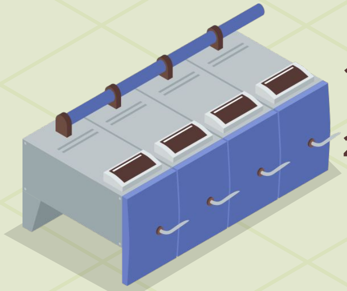
Click 'Login'

Remember Me?

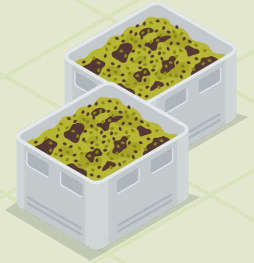
Click type: Single

Mouse button: Left

Automate LOGIN

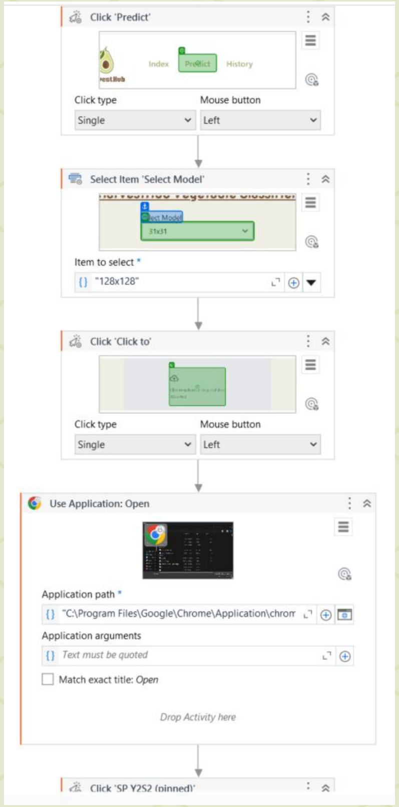


1. Head to registration page and login page
2. Fill in the form



Robotic Process Automation

1. **Head to predict page**
2. **Select 128x128 model**
3. **Click on Input and select Image using specified file path**



Click 'Predict'

Click type: Single
Mouse button: Left

Select Item 'Select Model'

Item to select *: "128x128"

Click 'Click to'

Click type: Single
Mouse button: Left

Use Application: Open

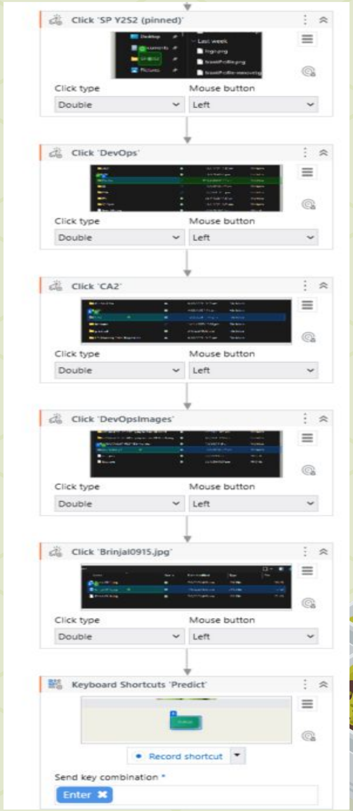
Application path *: "C:\Program Files\Google\Chrome\Application\chror

Application arguments: Text must be quoted

Match exact title: Open

Drop Activity here

Click 'SP Y2S2 (pinned)'



Click 'SP Y2S2 (pinned)'

Click type: Double
Mouse button: Left

Click 'DevOps'

Click type: Double
Mouse button: Left

Click 'CA2'

Click type: Double
Mouse button: Left

Click 'DevOpsImages'

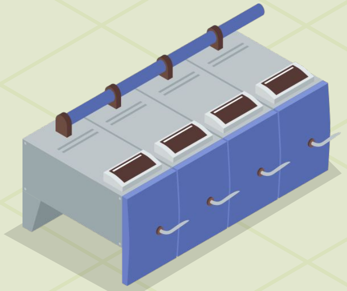
Click type: Double
Mouse button: Left

Click 'Brinjal0915.jpg'

Click type: Double
Mouse button: Left

Keyboard Shortcuts 'Predict'

Send key combination *: Enter



Automate Prediction