HoloPi\_Server Web API

1. *URL:* http://0.0.0.0:5000/

*Args*: N/A

*Return*: value: 1 type: int

*Intro*:

Client requests this API for a successful connection test.

1. *URL*: http://0.0.0.0:5000/detect

*Args*: name: file type: werkzeug.datastructure.FileStorage

*Return*: value: Image Processing Results type: JSON

*Intro*:

Client requests this API for image processing.

The argument receives the image uploaded, then this image will be stored in a particular location on Raspberry Pi. Meanwhile, another program takes this image as an argument for further processing including:

1. object detection
2. wrap each detected object with colorful outline rectangles
3. put the final detection results in a JSON format and return it to this API

Finally, return the JSON value as a response back to the client.

1. *URL*: http://0.0.0.0:5000/share

*Args*: name: sharing type: dict action:append

*Return*: value: 1 type: int

*Intro*:

Client requests this api for sharing detection results.

The argument receives the to-be-shared detection results which encapsulated in a JSON format and will be sent and to another Raspberry Pi server and stored in a local variable.

1. *URL*: http://0.0.0.0:5000/receive

*Args*: N/A

*Return*: value: Shared Detection Results type: JSON

*Intro*:

If the local variable does hold the value of shared detection results, return in a JSON format as a response back to the client and clear the local variable for the next sharing preparation. Otherwise, return 0 as a response indicating that nothing to be shared right now.

1. *URL*: http://0.0.0.0:5000/store

*Args*: name: sharing type: dict action: append

Name:sourceIp type:str

*Return*: value: 1 type: int

Intro:

Receive the to-be-shared detection results from other Client and its IP address, and then store the received value and IP address in local variables.

1. *URL*: http://0.0.0.0:5000/notify

*Args*: N/A

*Return*: value: 1 /0 type: int

Intro:

If the local Raspberry Pi has stored data sent from other Pi, notify the user by returning value 1, otherwise returning value 0 indicating nothing shared to this local Pi.