



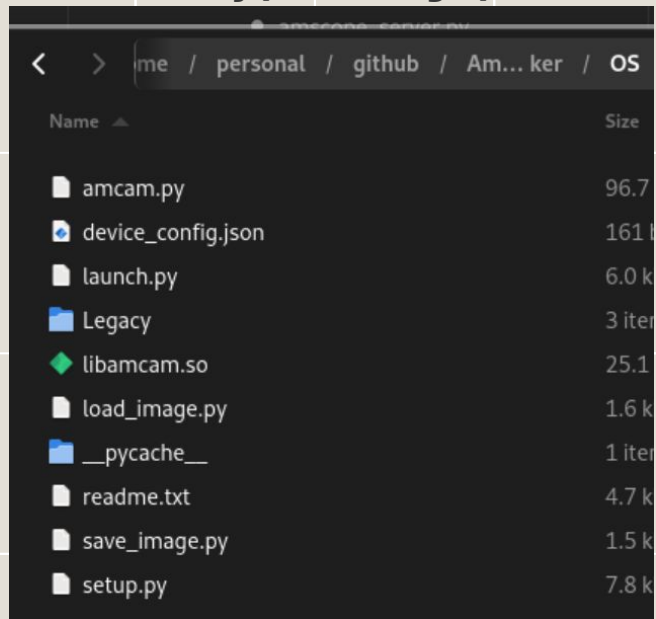
# Docker Updates

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# New Universal “OS” Directory

## New Directory (File Manager)



A screenshot of a file manager interface showing the contents of a directory named 'OS'. The breadcrumb path is 'me / personal / github / Am... ker / OS'. The file list includes:

Name	Size
amcam.py	96.7
device_config.json	161 t
launch.py	6.0 k
Legacy	3 iter
libamcam.so	25.1
load_image.py	1.6 k
__pycache__	1 iter
readme.txt	4.7 k
save_image.py	1.5 k
setup.py	7.8 k

- The major goal is to create a set of python scripts to perform a variety of tasks.
- This includes fixing a docker image to a specific device (by serial), building, renaming, saving, importing/exporting, and launching them as desired
- **As you can note, however, a .so file appears inside of the directory. This is due to dependencies from amcam.py being utilized in setup.py (for hardware identification)**
- This issue will be resolved in the main branch revision to TDC001-Docker, which is the base of this project. I will rewrite this code to utilize general python packages to perform identification and configuration.

# Setup.py - A new script addition

## Setting Name/Tag/Exposed Port, and Building

```
Select a compose file to modify:
1) Code/Project/docker-compose.backend.yml
> 1
Enter the new Docker image name (e.g., amscope-camera-backend): amscope-camera-backend
Enter the new tag (camera-1): camera1
Enter the new exposed port (e.g., 8000): 8006
Updated /home/framework/personal/github/Amscope-Docker/Code/Project/docker-compose.backend.yml with image name: amscope-camera-backend, tag: camera1, and port: 8006
Do you want to rebuild the Docker image? [y/N] y
[INFO] Building image for amscope-camera-backend...
```

## Selection for device\_config.json

```
=> [backend] Resolving provenance for metadata
[+] Building 1/1
✓ backend Built
0: MU300 (Serial: TP130704151840307AD86BB1F84A989)
Select camera [0]:
```

device\_config.json saves in /OS

```
amcam.py
device_config.json
launch.py
Legacy
libamcam.so
load_image.py
__pycache__
readme.txt
save_image.py
setup.py
```

- The new setup.py script fixes all of the things you'd prefer to have done for you when making a new project with this repo
- Edits are directly done to the docker config file of your choice, from a command line interface
- Lastly, you can choose your preferred device from a list of connected devices, which will create a new config file that other scripts will use
- The device\_config.json is a critical file that allows the docker container to be bound to a specific set device

# What Works - What Doesn't

**/get\_ping** run in api, returns successful for connection

Responses

Curl

```
curl -X 'GET' \
  'http://localhost:8000/get_ping' \
  -H 'accept: application/json'
```

Request URL

http://localhost:8000/get\_ping

Server response

Code	Details
200	<p>Response body</p> <pre>{   "status": "connected",   "name": "MU300" }</pre> <p>Response headers</p> <pre>content-length: 37 content-type: application/json date: Wed, 30 Jul 2025 17:32:34 GMT server: uvicorn</pre>

- As of current, the /get\_ping command successfully works,
- /get\_ping returns if device\_config.json has been found (by the server.py file), and if the device specified is connected or disconnected
- However, much of the functionality of the original server still needs to be reconciled with the new device\_config.json, including the “/startup” event, which is the “main” method of our fastapi server
- These issues are easy to patch, and will soon be done.

# Remaining Roadmap

## Hotfix API

- Focus on getting the backend running in its most minimal state quickly

## Finish Revising

- Close up Amscope-Docker documentation and code
- Build docker images for each camera, save them
- Test repo on all platforms to verify functionality

## Major Release

- Merge the dev branch into the main branch for the first release of the amscope-docker repo

## Retool TDC-001

- Rename my original repo, files, and directories to reflect a universal use case
- Revise documentation to reflect usage for all projects
- Carry over refined additions from Amscope-Docker into "Lab-Docker"

## Major Release (two)

- Release the new and improved version of the "Lab-Docker" repo

## Move to Heliotis-Docker

- The new "Lab-Docker" repo will be used as a template for the Heliotis-Docker repo
- This dev cycle repeats.