Possible app workflow

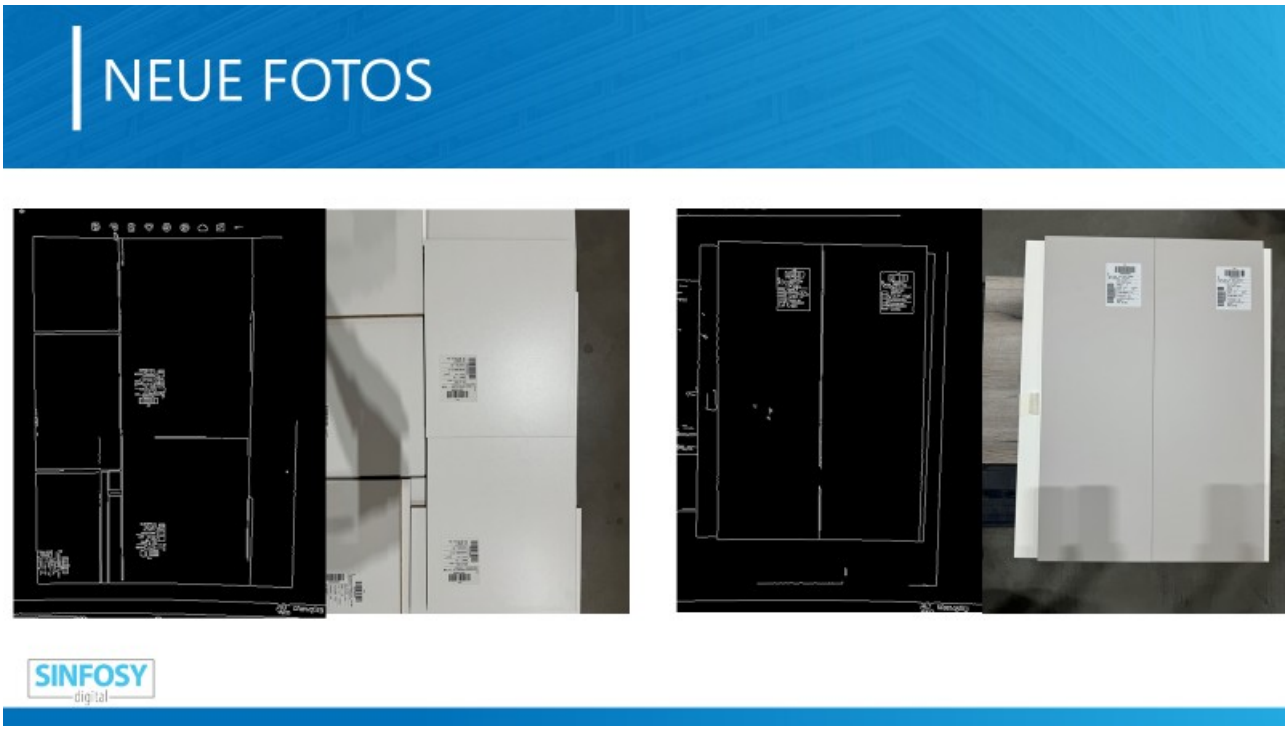
App start image processing and do that continuously..
It can process video or separate photos.
That images should be processed by OpenCV at the phone, no sending data to any remote server.
Every time you should detect the pallet and it orientation. Each pallet has predefined size (for example 100cm x 90cm) and used to calibrate coordinates (0, 0) to (width/length) for future processing.
You should detect all four corners of the pallet aligned on base view (ground).
Next detect all shapes we have on the photo and all barcodes inside that shapes.
Labels (barcodes) can fail to detect.
As result we should receive list of objects with size (in cm), coordinates (related to the pallet) and recognized barcode for each detected shape.
That list of objects you should send to given API for verification.

App will be tested that it can do that without operator interaction!

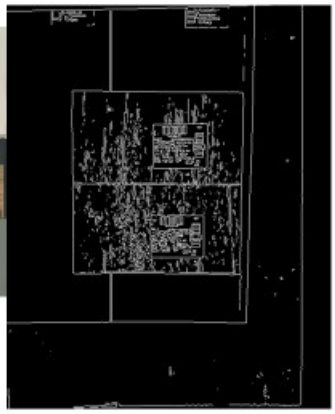
Sample of Android OpenCV app

To start working with OpenCV you can try OpenCV Image Process apk from GooglePlay.
https://github.com/momomomo111/camerax_opencv

Sample Image Processing



NEUE FOTOS - 2



SINFOSY digital

Example of expected results

The pallet somehow located on the floor. But we always know the size of that pallet.
It is 100x90cm (red line). We want think about left/bottom corner of the pallet as 0,0 and top/right corner as 100,90.
Now we want detect all rectangular shapes on that pallet and all corner coordinates and all sizes of each rectangle. (Green rectangles).
It will be good to know that we sure about shapes 1,2 (blue).
It looks like good shapes 3, 4 (blue)
And shapes 5, 6 are wrong, it is not rectangles (ok, we can discuss about shape 5 not sure right now)