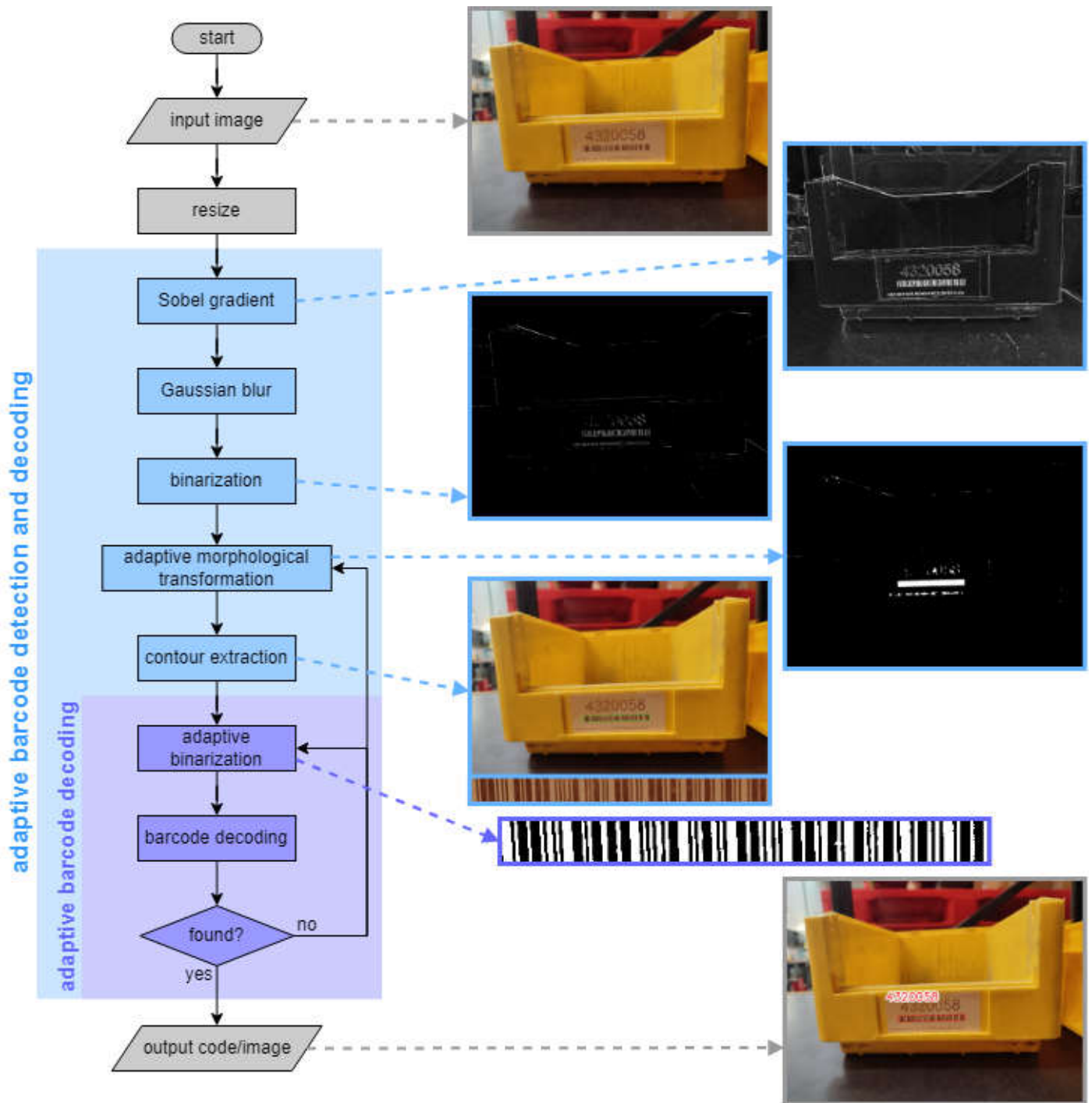


Adaptive Barcode Reader

This git repository provides an adaptive barcode detection and decoding function for robust barcode detection and decoding. The project is a part of expert in team innovation project (E22). The code along with an example are provided at https://github.com/Arthicha/Barcode_Detection_and_Decoding.git.

Method

The flowchart of the provided example program is presented in the figure below. The “adaptive barcode detection and decoding” block denotes the “adaptive_read()” function imported from “barcode_reader.py”.



Installation

To install the required python modules (standard modules, such as numpy and opencv, not included), run `pip install -r requirement.txt`.

Runing The Example

Running an example program

To run an example code, please run `python example.py` . The example program will perform adaptive barcode detection and decoding on all images locating in the “imgs” folder.

Running the markdown documentation

To view the readme, please run `grip -b readme.md` .

Adaptive Barcode Detection and Decoding

python code:

```
from barcode_reader import *  
img = <input image>  
code, intermediate_imgs = adaptive_read(img, imgsize=(<width>,<height>), detectionpara  
ms=(<k>,<dk>,<kmax>), binarizationparams=(<th>,<dth>,<thmax>))
```

adaptive_read()

File: barcode_reader.py

Description: perform adaptive barcode detection and decoding

Input:

1. img (opencv array): an image of an arbitrary size
2. imgsize (tuple (w,h)): the desired size (width,height)
3. detectionparams (tuple (k,dk,kmax)): the adaptive detection parameters
 - k (int): initial morphological transformation kirnel size

- dk (int): morphological transformation kernel step size
- kmax (int): maximum morphological transformation kernel step size
- 4. binarizationparams (tuple (th,dth,thmax)): adaptive binarization parameters
 - th (int): initial threshold
 - dth (int): threshold step
 - thmax (int): maximum threshold

Output:

1. code (string): barcode data
2. intermediate_imgs (list of images): intermediate images

Result

test1.jpg





test2.jpg



Configure Scanner

Scan the barcode to configure the scanner.

0123456789

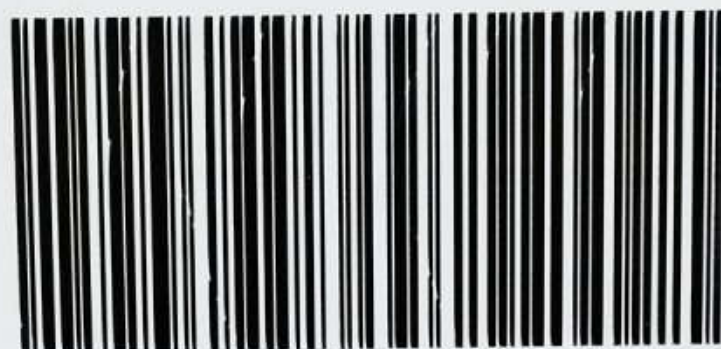


0123456789

Print code

Cancel

test3.jpg



165456432135659

5416846413216165456432135659



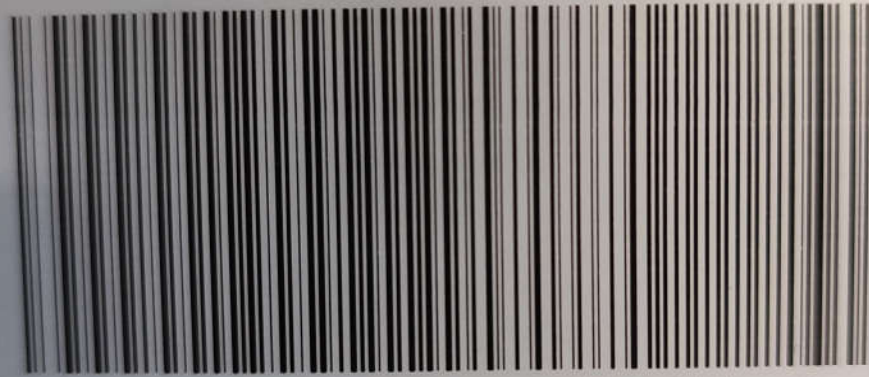
165456432135659

test4.jpg





test5.jpg



00044674487070KANBAN 2



test6.jpg

ks 1000 kg

palleplads



23A-04-01B



23A-04-00B



test7.jpg



4320058



HEX.SET SCR ISO4014 M12x280 8.8 U tZn



test8.jpg





test9.jpg

ks 1000 kg
palleplads



23A-04-00B



Reference

This code is modified from [this git repository](#).