**Project 6 Coin Detection – Part 2 complete**

Name: Aditya Vasantharao Period: 3 Date: 3/12/22

Did you name your file l062.cpp (Lower case L, then 062)? Yes

Did you create the edge matrix? Yes

Did you create the gradient direction matrix? Yes

Did you create the imagev.ppm (visual of votes)? Yes

Did you use Bresenham's line algorithm for voting? Yes

Does your application create coins.ppm file? Yes

Does you code display on the screen and in results.txt a summary of your results? Yes

Did you test your code on terminal/gnu linux in c++11? Yes

Additional command line parameters I implemented:

-rmax: max coin radius to run circle voting on

-window\_size: size of the window used for local max thresholding (for an image with very little coin overlap, this should be about 2 \* rmax, for an image with lots of coin overlap, this should be much lower)

Run your code (the same code you submit) on the 3 images I provided (easy, medium, hard) then paste here the following:

* The initial image ( the one I provided), the imagev.ppm, coins.ppm you obtained running your code, copy paste here the content of your results.txt file your code created

1. For the easy image:

Command line including all parameter values used for this image:

./l062.exe -L 65 -H 130 -F coins1.ppm -TC 5 -TCircle 5 -rmax 140 -window\_size 260

Initial image:

A picture containing background pattern

Description automatically generated

imagev.ppm:

A picture containing outdoor object, night sky

Description automatically generated

coinsppm:

Background pattern

Description automatically generated

Content of results.txt:

42 Pennies

9 Nickels

2 Dimes

12 Quarters

0 Silver Dollars

Total sum: $4.07

1. For the medium image:

Command line including all parameter values used for this image:

./l062.exe -L 80 -H 150 -F coins2.ppm -TC 5 -TCircle 60 -rmax 140 -window\_size 170

Initial image:

A picture containing circle

Description automatically generated

imagev.ppm:

A picture containing outdoor object, star

Description automatically generated

coinsppm:

Background pattern

Description automatically generated

Content of results.txt:

57 Pennies

22 Nickels

0 Dimes

18 Quarters

0 Silver Dollars

Total sum: $6.17

1. For the hard image

Command line including all parameter values used for this image:

./l062.exe -L 80 -H 150 -F coins3.ppm -TC 25 -TCircle 15 -rmax 150 -window\_size 130

Initial image:

A picture containing floor

Description automatically generated

imagev.ppm:

A picture containing blur

Description automatically generated

coinsppm:

Bubble chart

Description automatically generated with low confidence

Content of results.txt:

82 Pennies

14 Nickels

6 Dimes

30 Quarters

0 Silver Dollars

Total sum: $9.62