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CS 435

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Homework #5

A close up of text on a white surface

Description automatically generatedTheory

A close up of text on a white background

Description automatically generated

Programming Part1

A screenshot of a computer

Description automatically generated

Original image on the left, edged image on the right.

Programming Part2

A screenshot of a computer

Description automatically generated

Programming Part3

A screenshot of a video game

Description automatically generated

I have found the peaks by sorting my histogram so that I can find the highest values, then I compare that to the threshold, so I don’t have a lot of peaks only the ones higher. Then I have clustered my points from histogram to lowx, lowy, highx and highy and then used that for my next calculation by changing my histogram accordingly.

Programming Part 4

I have used the formulas such as these to find the points in lines. Then saved all the points then extracted the intersection points to find the corners of the paper.

slope = (y2-y1)/(x2-x1);

yLeft = slope \* (xLeft - x1) + y1;

A screenshot of a cell phone

Description automatically generated

Programming Part 5

A screenshot of a cell phone

Description automatically generated

I am not sure if this was the right form but everything is automated so I am sure it would work for any picture

Another Example

A screenshot of a computer screen

Description automatically generated

Thank you!