Homework 3 Report

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Steps that are implemented for the task:

For the first 4 steps, I strictly followed the instruction and obtained 370 corners in the left image and 477 corners in the right image.

For steps 5 and 6, I implemented the following pseudo code.

*For each corner 'C' in the left image,*

*calculate the SAD value between 'C' and each corner in the right image.*

*sort the result to get corners with top 5% SAD values.*

*find the coordinates of ‘C’ in the right image by deducting the disparity off of the x coordinate of ‘C’ in the left image*

*for each of resulted corners 'C\_r',*

*calculate the Euclidean distance between ‘C\_r’ and ‘C’*

*if the distance is less than sqrt(2)*

*add 1 to correct\_number*

*else:*

*add 1 to incorrect\_number*

Results:

Data correct points incorrect points accuracy

Top 5% 201 6829 0.0286

Top 10% 216 13474 0.0158

Top 15% 229 20491 0.0111

Top 20% 243 27137 0.0089

Top 25% 251 34159 0.0073

Top 30% 253 40817 0.0062

Top 35% 254 47846 0.0053

Top 40% 256 54504 0.0047

Top 45% 263 61157 0.0043

Top 50% 263 68187 0.0038

Top 55% 264 74846 0.0035

Top 60% 267 81873 0.0033

Top 65% 268 88902 0.0030

Top 70% 270 95560 0.0028

Top 75% 270 102590 0.0026

Top 80% 272 109248 0.0025

Top 85% 273 116277 0.0023

Top 90% 273 122937 0.0022

Top 95% 275 129965 0.0021

Top 100% 275 136625 0.0020