CS 4476 PS3

<name>
<GT email>
<GT username>
<GTID>

1.1: Harris Corner Detector

<insert visualization of Notre Dame interest points from proj3.ipynb here>

< insert visualization of Rushmore interest points from proj3.ipynb here >

1.1: Harris Corner Detector

< insert visualization of Gaudi interest points
from proj3.ipynb here >

1.1: Harris Corner Detector

- Briefly describe how the Harris corner detector works.

- What does the second_moments() helper function do?

- What does the corner_response() helper function do?

1.3: Feature Matching

<insert feature matching visualization of Notre Dame from proj3.ipynb>

<insert feature matching visualization of Rushmore from proj3.ipynb >

1.3: Feature Matching

<insert feature matching visualization of Gaudi from proj3.ipynb >

<Describe your implementation of feature matching.>

Results: Ground Truth Comparison

<Insert visualization of ground truth comparison with Notre Dame from proj3.ipynb here>

<Insert visualization of ground truth comparison with Rushmore from proj3.ipynb here>

Results: Ground Truth Comparison

<Insert visualization of ground truth comparison with Gaudi from proj3.ipynb here>

<Insert numerical performances on each image pair here. Also discuss what happens when you change the 4x4 subgrid to 2x2, 5x5, 7x7, 15x15 etc?>

1.4(a): Hyperparameter Tuning part 1 [Extra credit]

<Insert images of the ground truth correspondence and their corresponding accuracies for varying sigma in the second moments [3, 6, 10, 30] >

When changing the values for large sigma (>20), why are the accuracies generally the same?

1.4(a): Hyperparameter Tuning part 2 [Extra credit]

<Insert images of the ground truth correspondence and their corresponding accuracies for varying feature width in the SIFT [8, 16, 24, 32] >

What is the significance of changing the feature width in SIFT?

1.4(c): Accelerated Matching [Extra credit]

<Insert Runtime/Accuracy of your faster matching implementation. What did you try and why is it faster?>