

Name (netid): Your Name (Your Netid)

CS 445 - Project 2: Image Quilting

Complete the claimed points and sections below.

Total Points Claimed **100 / 175**

Core

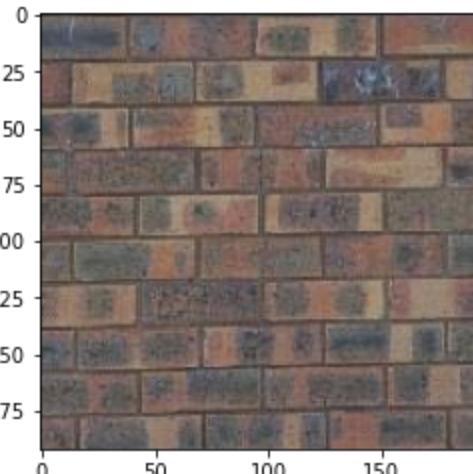
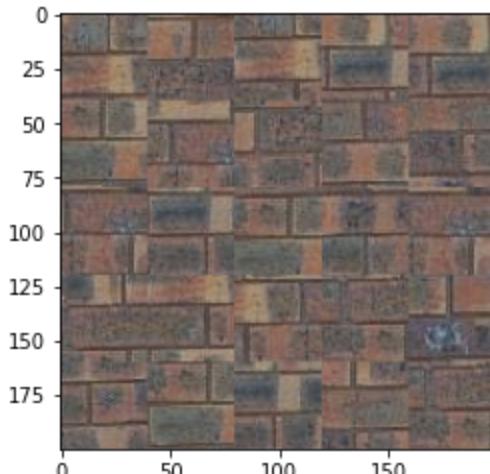
- | | |
|--------------------------------|---------|
| 1. Randomly Sampled Texture | 10 / 10 |
| 2. Overlapping Patches | 20 / 20 |
| 3. Seam Finding | 20 / 20 |
| 4. Additional Quilting Results | 10 / 10 |
| 5. Texture Transfer | 30 / 30 |
| 6. Quality of results / report | 10 / 10 |

B&W

- | | |
|--------------------------------------|--------|
| 7. Iterative Texture Transfer | 0 / 15 |
| 8. Face-in-Toast Image | 0 / 20 |
| 9. Hole filling w/ priority function | 0 / 40 |

1. Randomly Sampled Texture

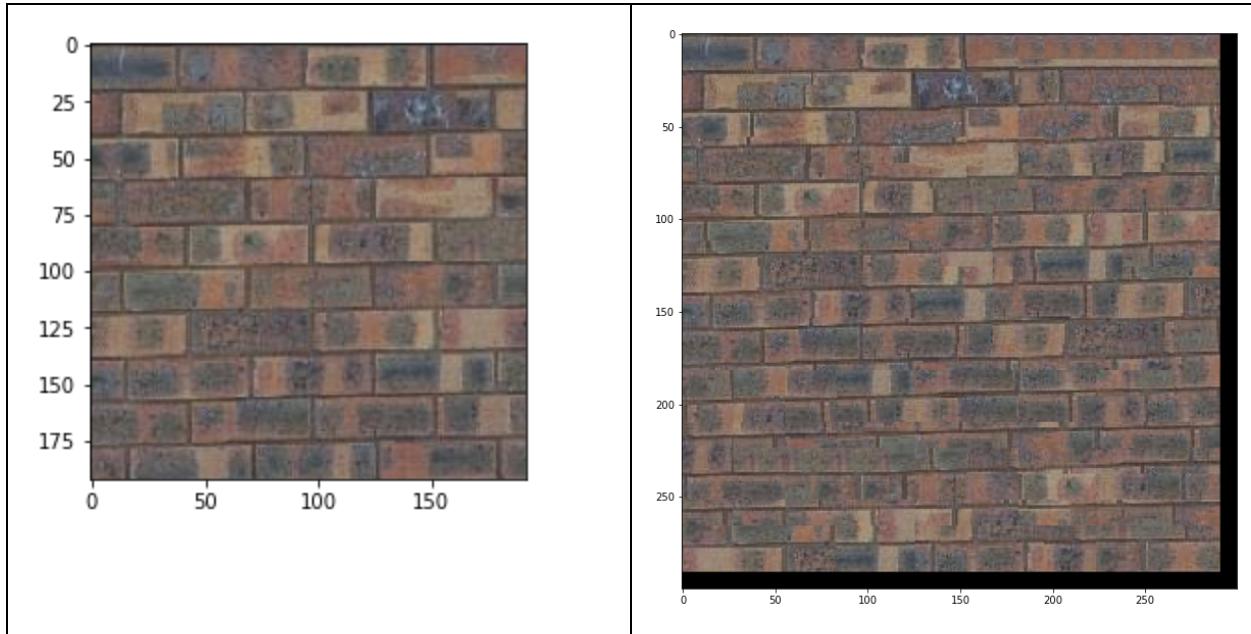
Following results were generated with patch_size=40 and out_size=200:

Sample image	Output image
	

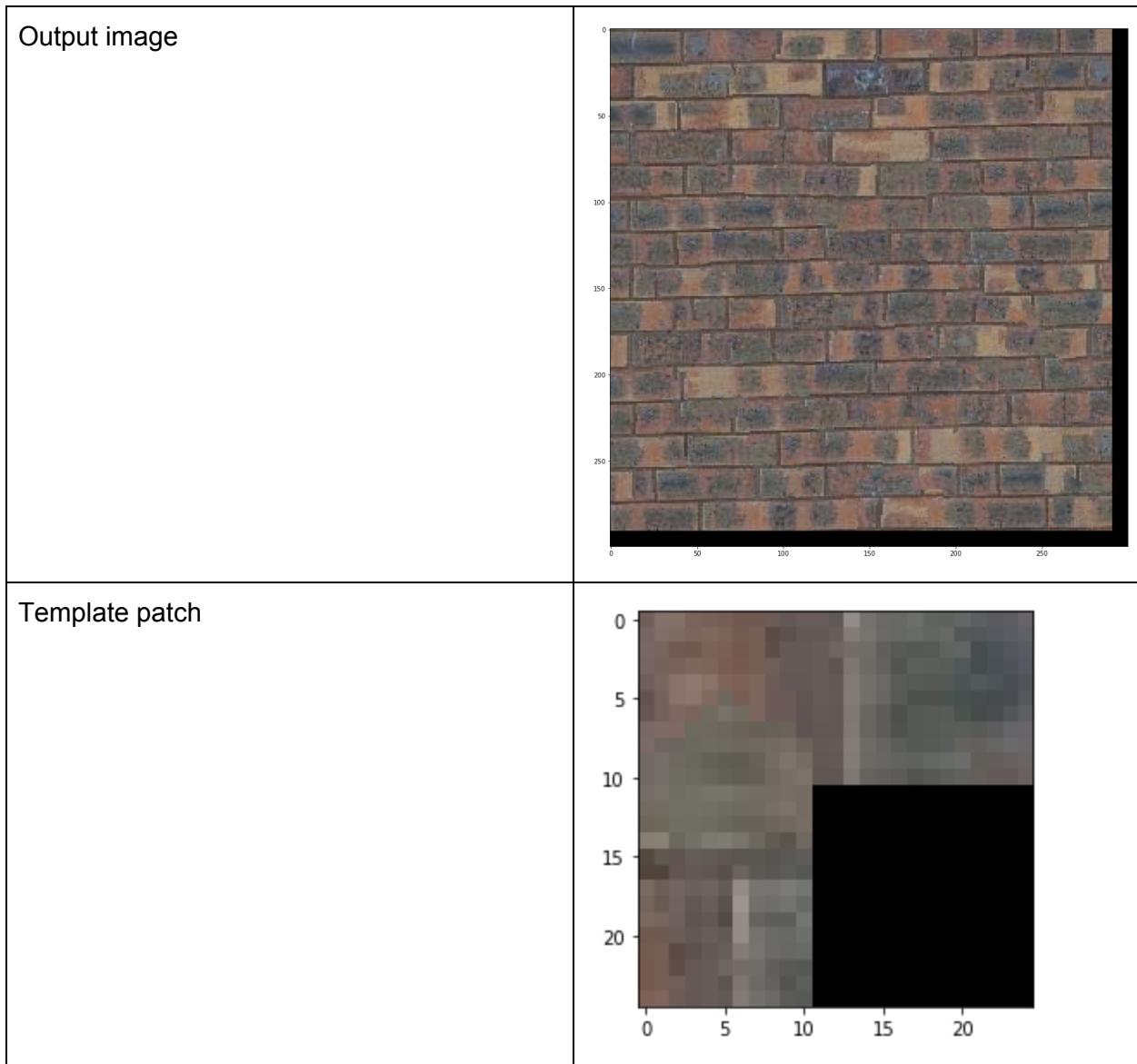
2. Overlapping Patches

Following results were generated with patch_size=25, out_size=200, overlap=11, and tol=3:

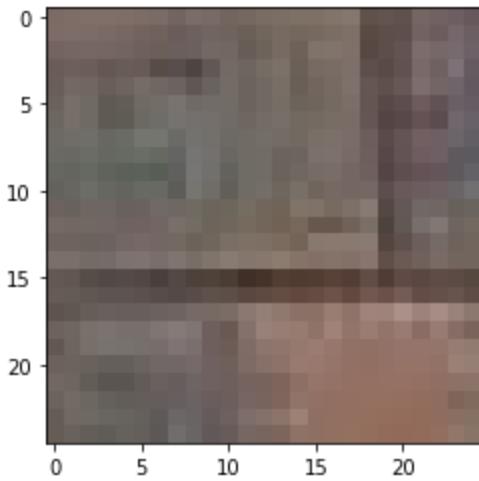
Sample image	Output image
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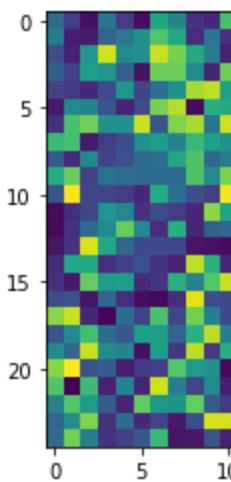
3. Seam Finding



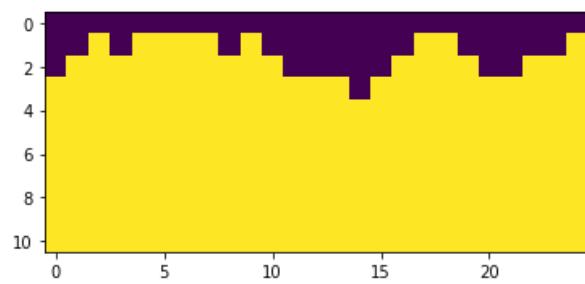
Sample patch



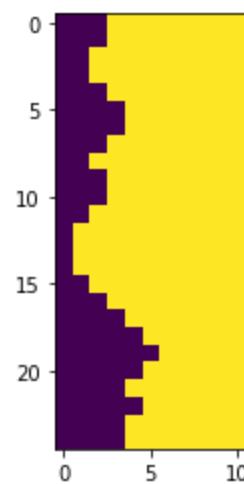
SSD cost of vertical overlap



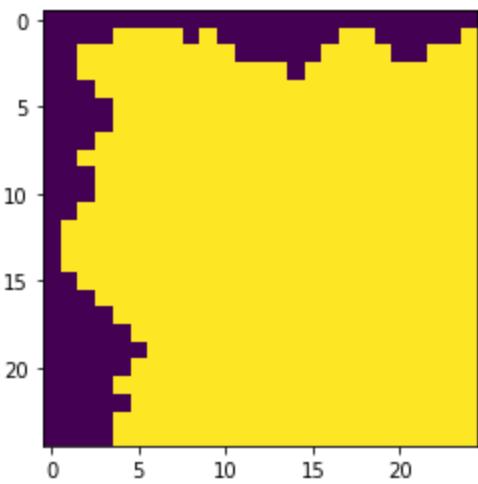
Horizontal mask



Vertical mask

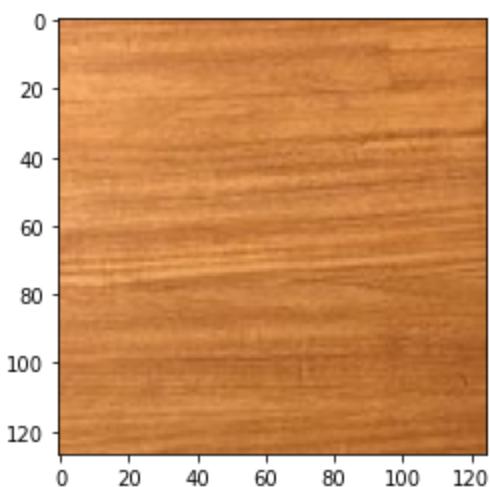


Combination mask

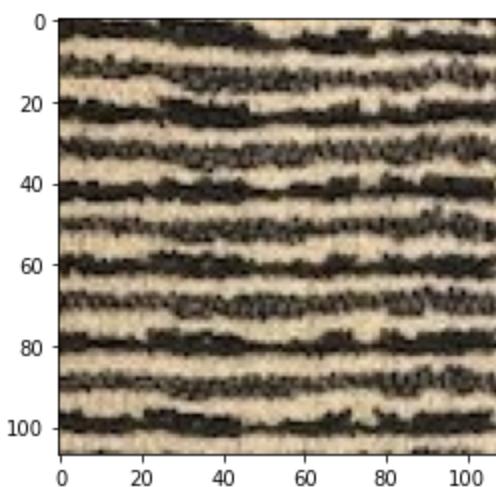


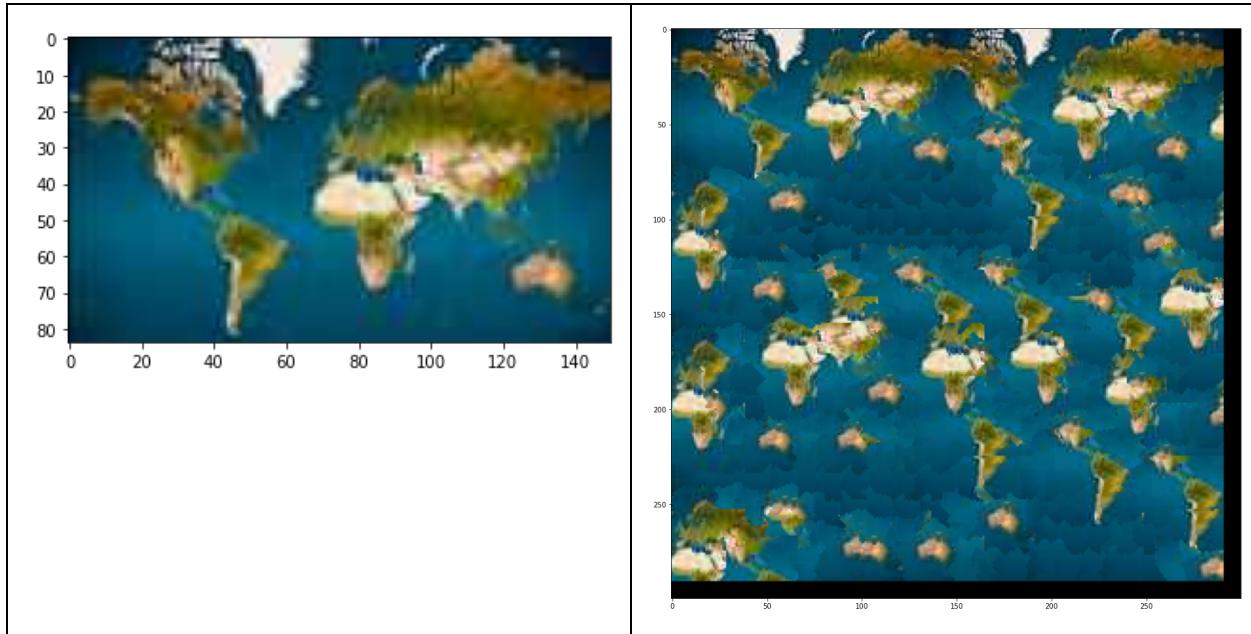
4. Additional Quilting Results

Sample image



Output image



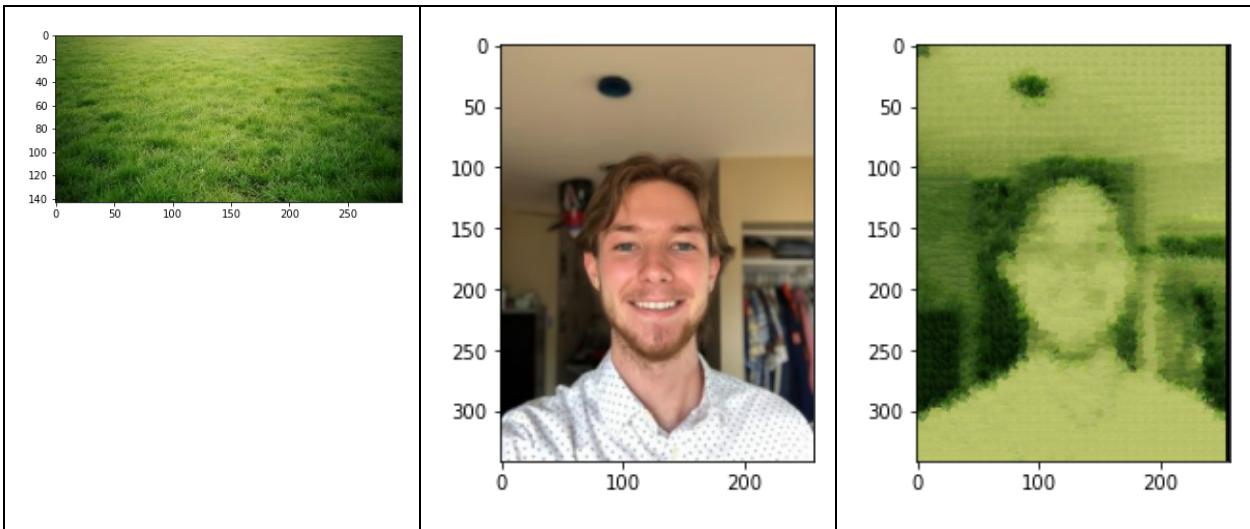


5. Texture Transfer

Texture transfer reconstructs a guidance image using patches from a texture sample with similar intensity. A good texture sample image should have a variety of intensities, otherwise the guidance image won't come through as clearly. When deciding which patches are most similar, you consider the SSD of intensities of patches in the sample and the guidance image and the SSD of the existing overlap template and patches in the sample. You take the weighted average of the two SSDs, using alpha according to the equation below:

$$\text{cost_img} = \alpha * \text{ssd_overlap} + (1-\alpha) * \text{ssd_transfer}$$

Sample image	Guidance image	Output image



6. Quality of results / report

Nothing extra to include (scoring: 0=poor 5=average 10=great).