

Supplemental Material for Creating Texture Exemplars from Unconstrained Images (Yale University Department of Computer Science Technical Report 1483)

Yitzchak David Lockerman, Su Xue, Julie Dorsey, and Holly Rushmeier

This document contains additional examples that did not fit into the main report due to size constraints. It is divided into two sections.

The first section is the result of our experiments comparing different feature spaces. Each page has an original image and a tile selected by our “naive” user. Additionally it includes a tile set for each feature space along with the number of graphics students that approved each tile set.

Note that we ran the test twice for each feature space. The tile output of the program should be nearly identical for each run, with the exception of slight variations caused by non-determinism. The differences in the user responses can be attributed to variability of what a single reviewer considered “the same texture” as the test progressed.

The second section includes a number of additional examples. For each example we included the original image, a screenshot of our GUI, the tiles obtained from our system and the resulting texture synthesis.

1 Experiment Results



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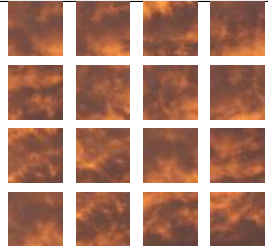
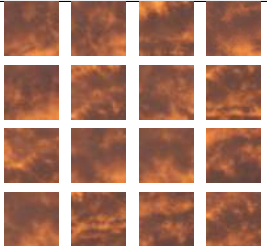
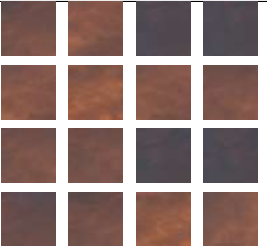
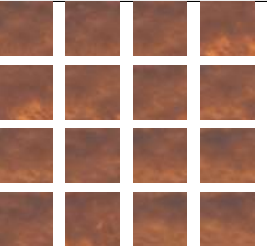
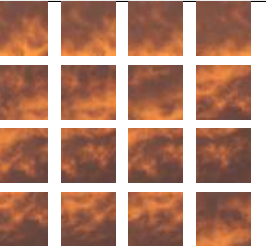
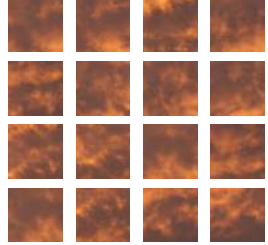
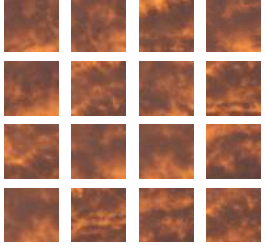

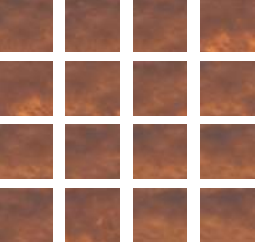
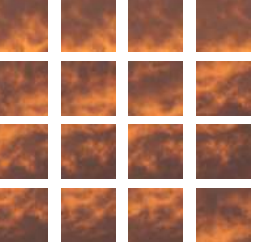
run	2-moments	5-moments	HOG Texture Space	Trivial Feature Space	Autocorrelation Feature Space
1	 7 of 8 participants approved of all the tiles	 7 of 8 participants approved of all the tiles	 no participants approved of all tiles	 5 of 8 participants approved of all the tiles	 7 of 8 participants approved of all the tiles
2	 6 of 8 participants approved of all the tiles	 6 of 8 participants approved of all the tiles	 no participants approved of all tiles	 6 of 8 participants approved of all the tiles	 6 of 8 participants approved of all the tiles



Image by Flickr user Moyan Brenn, under the Creative Common Attribution 2.0 Generic License
<http://flic.kr/p/9zbaf>

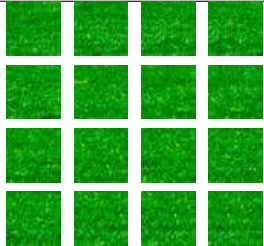
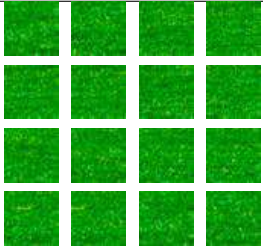
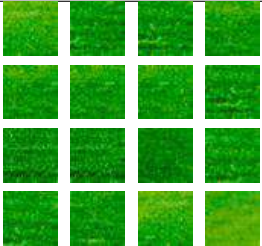
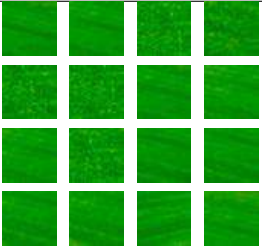
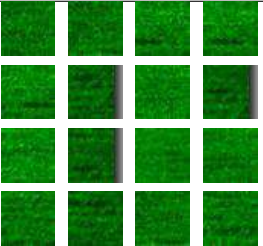
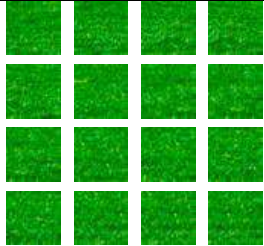
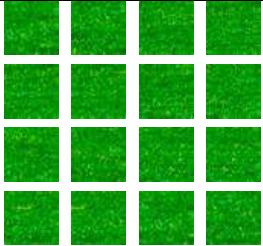
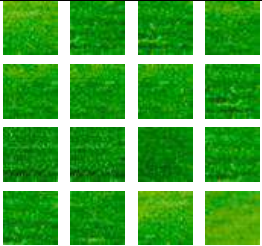
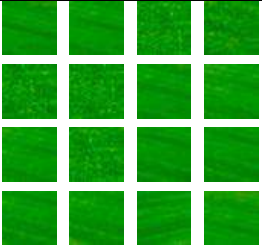
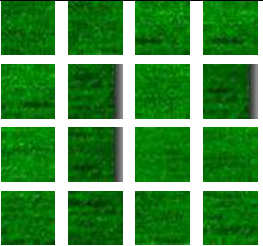
run	2-moments	5-moments	HOG Texture Space	Trivial Feature Space	Autocorrelation Feature Space
1	 8 of 8 participants approved of all the tiles	 7 of 8 participants approved of all the tiles	 2 of 8 participants approved of all the tiles	 1 of 8 participants approved of all the tiles	 no participants approved of all tiles
2	 8 of 8 participants approved of all the tiles	 8 of 8 participants approved of all the tiles	 3 of 8 participants approved of all the tiles	 1 of 8 participants approved of all the tiles	 no participants approved of all tiles



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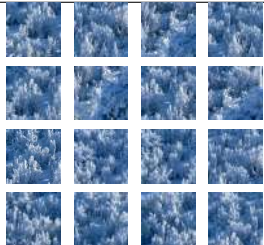


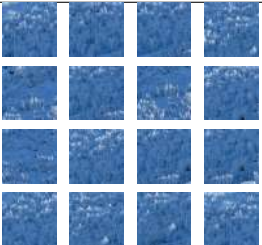
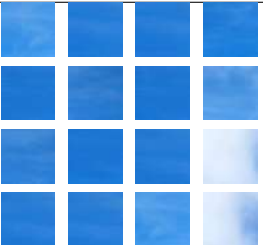
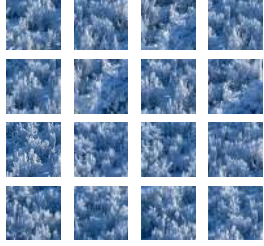
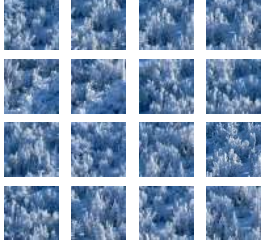
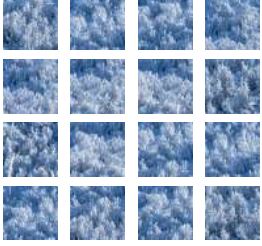
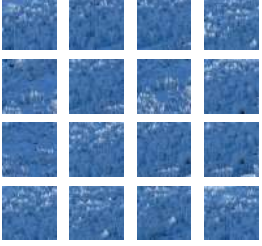

run	2-moments	5-moments	HOG Texture Space	Trivial Feature Space	Autocorrelation Feature Space
1	 7 of 8 participants approved of all the tiles	 6 of 8 participants approved of all the tiles	 7 of 8 participants approved of all the tiles	 4 of 8 participants approved of all the tiles	 no participants approved of all tiles
2	 7 of 8 participants approved of all the tiles	 8 of 8 participants approved of all the tiles	 8 of 8 participants approved of all the tiles	 5 of 8 participants approved of all the tiles	 1 of 8 participants approved of all the tiles



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<http://flic.kr/p/4MKRG5>

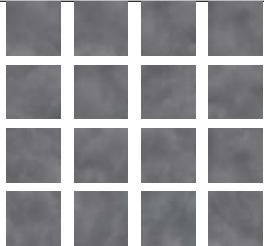
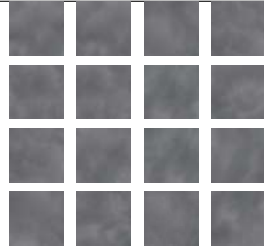
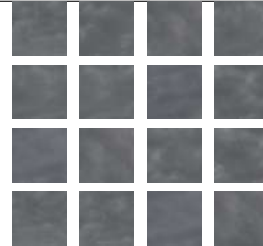
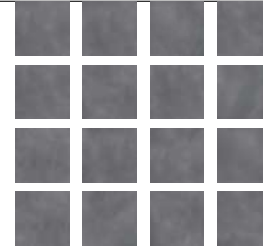
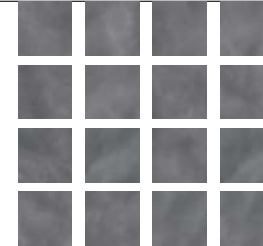
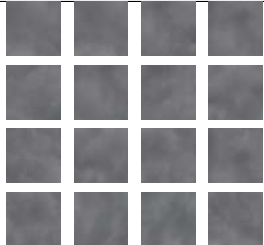
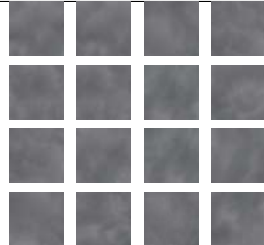
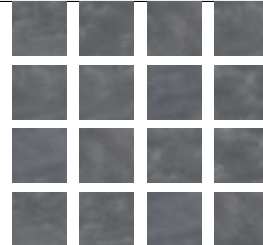
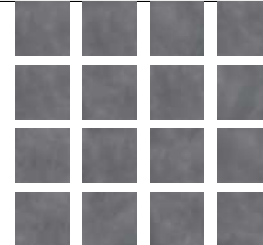
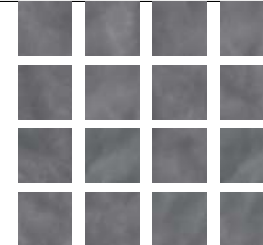
run	2-moments	5-moments	HOG Texture Space	Trivial Feature Space	Autocorrelation Feature Space
1	 8 of 8 participants approved of all the tiles	 8 of 8 participants approved of all the tiles	 7 of 8 participants approved of all the tiles	 8 of 8 participants approved of all the tiles	 8 of 8 participants approved of all the tiles
2	 8 of 8 participants approved of all the tiles	 8 of 8 participants approved of all the tiles	 7 of 8 participants approved of all the tiles	 8 of 8 participants approved of all the tiles	 8 of 8 participants approved of all the tiles



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<http://flic.kr/p/9uCMNF>

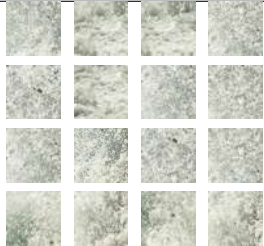
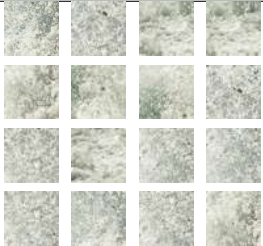
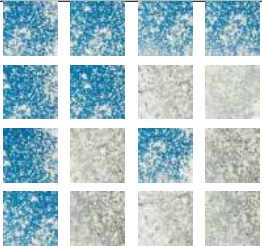

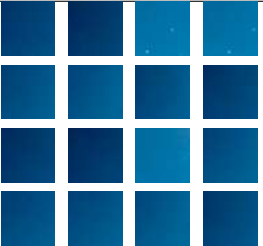
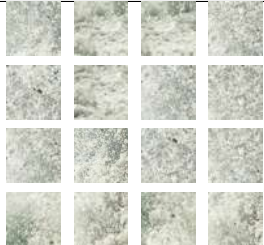
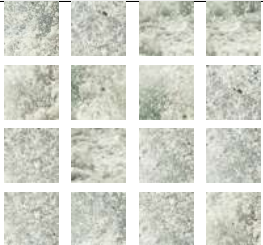
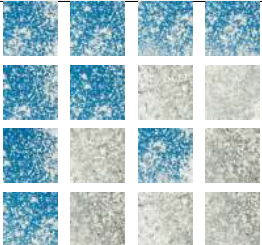
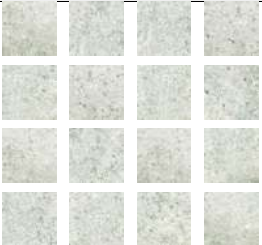
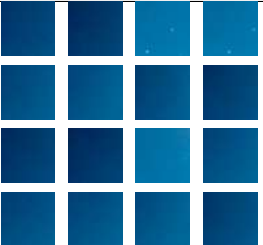
run	2-moments	5-moments	HOG Texture Space	Trivial Feature Space	Autocorrelation Feature Space
1	 4 of 8 participants approved of all the tiles	 5 of 8 participants approved of all the tiles	 no participants approved of all tiles	 5 of 8 participants approved of all the tiles	 no participants approved of all tiles
2	 4 of 8 participants approved of all the tiles	 6 of 8 participants approved of all the tiles	 no participants approved of all tiles	 2 of 8 participants approved of all the tiles	 no participants approved of all tiles



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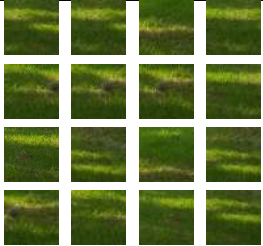

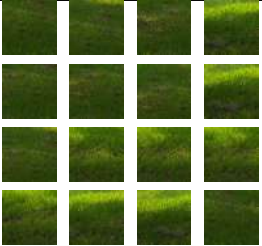

run	2-moments	5-moments	HOG Texture Space	Trivial Feature Space	Autocorrelation Feature Space
1	 5 of 8 participants approved of all the tiles	 4 of 8 participants approved of all the tiles	 no participants approved of all tiles	 1 of 8 participants approved of all the tiles	 no participants approved of all tiles
2	 5 of 8 participants approved of all the tiles	 4 of 8 participants approved of all the tiles	 no participants approved of all tiles	 2 of 8 participants approved of all the tiles	 no participants approved of all tiles



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<http://flic.kr/p/4Sj7fk>




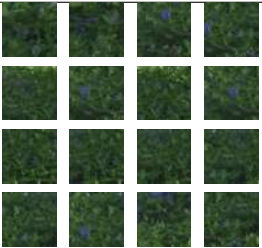



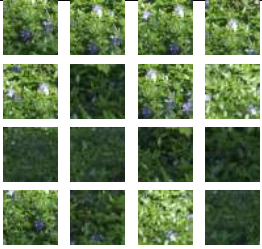


run	2-moments	5-moments	HOG Texture Space	Trivial Feature Space	Autocorrelation Feature Space
1	 4 of 8 participants approved of all the tiles	 5 of 8 participants approved of all the tiles	 no participants approved of all tiles	 6 of 8 participants approved of all the tiles	 no participants approved of all tiles
2	 5 of 8 participants approved of all the tiles	 5 of 8 participants approved of all the tiles	 no participants approved of all tiles	 6 of 8 participants approved of all the tiles	 no participants approved of all tiles



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<http://flic.kr/p/7TRX79>



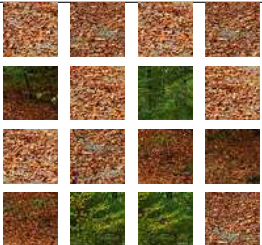







run	2-moments	5-moments	HOG Texture Space	Trivial Feature Space	Autocorrelation Feature Space
1	 no participants approved of all tiles	 5 of 8 participants approved of all the tiles	 no participants approved of all tiles	 no participants approved of all tiles	 no participants approved of all tiles
2	 no participants approved of all tiles	 5 of 8 participants approved of all the tiles	 no participants approved of all tiles	 no participants approved of all tiles	 no participants approved of all tiles



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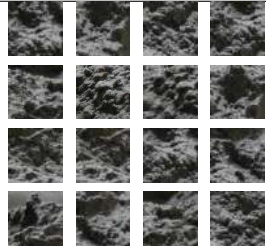
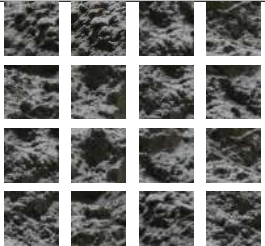
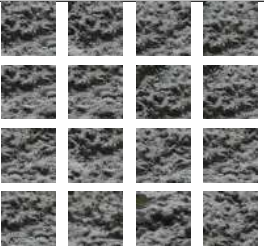
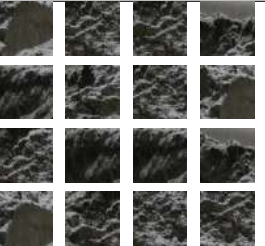
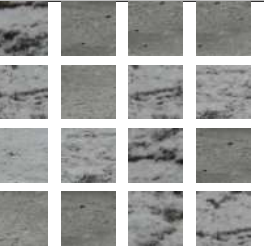
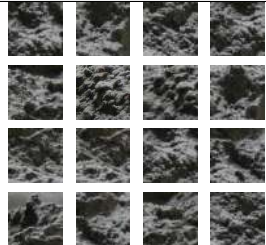
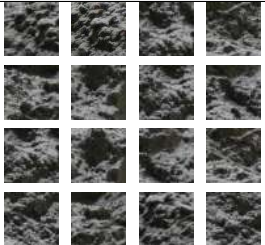
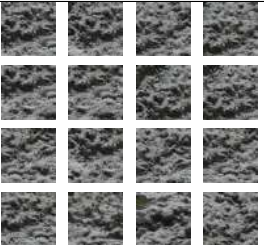
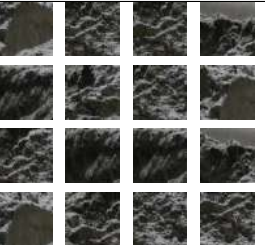
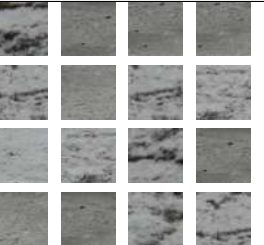
run	2-moments	5-moments	HOG Texture Space	Trivial Feature Space	Autocorrelation Feature Space
1	 2 of 8 participants approved of all the tiles	 4 of 8 participants approved of all the tiles	 6 of 8 participants approved of all the tiles	 no participants approved of all tiles	 1 of 8 participants approved of all the tiles
2	 2 of 8 participants approved of all the tiles	 5 of 8 participants approved of all the tiles	 6 of 8 participants approved of all the tiles	 no participants approved of all tiles	 no participants approved of all tiles



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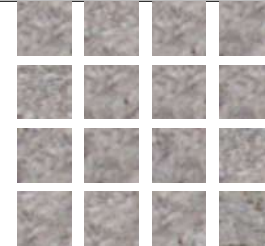
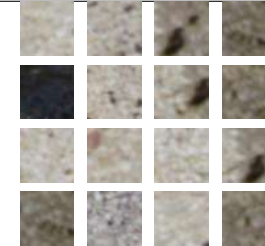





run	2-moments	5-moments	HOG Texture Space	Trivial Feature Space	Autocorrelation Feature Space
1	 <p>7 of 8 participants approved of all the tiles</p>	 <p>8 of 8 participants approved of all the tiles</p>	 <p>no participants approved of all tiles</p>	 <p>2 of 8 participants approved of all the tiles</p>	 <p>no participants approved of all tiles</p>
2	 <p>7 of 8 participants approved of all the tiles</p>	 <p>8 of 8 participants approved of all the tiles</p>	 <p>no participants approved of all tiles</p>	 <p>1 of 8 participants approved of all the tiles</p>	 <p>no participants approved of all tiles</p>



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<http://flic.kr/p/5XyRoU>

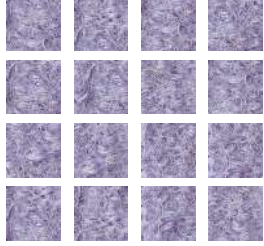
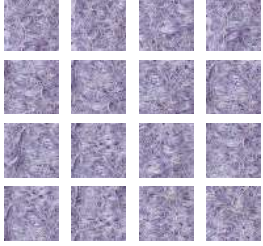

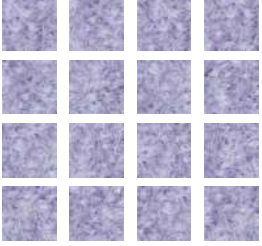
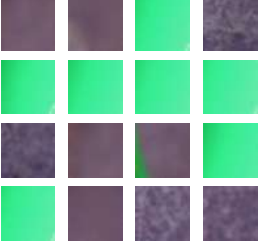
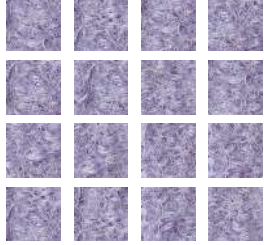
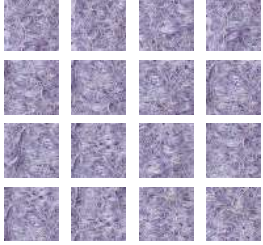

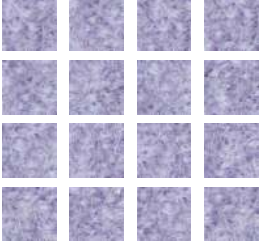
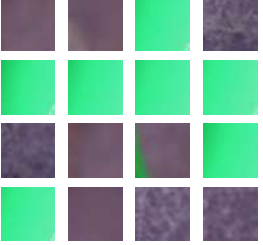









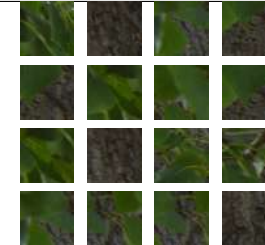
run	2-moments	5-moments	HOG Texture Space	Trivial Feature Space	Autocorrelation Feature Space
1	 7 of 8 participants approved of all the tiles	 7 of 8 participants approved of all the tiles	 no participants approved of all tiles	 2 of 8 participants approved of all the tiles	 no participants approved of all tiles
2	 8 of 8 participants approved of all the tiles	 8 of 8 participants approved of all the tiles	 no participants approved of all tiles	 1 of 8 participants approved of all the tiles	 no participants approved of all tiles



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<http://flic.kr/p/6wRbfj>

run	2-moments	5-moments	HOG Texture Space	Trivial Feature Space	Autocorrelation Feature Space
1	 6 of 8 participants approved of all the tiles	 6 of 8 participants approved of all the tiles	 no participants approved of all tiles	 no participants approved of all tiles	 no participants approved of all tiles
2	 6 of 8 participants approved of all the tiles	 5 of 8 participants approved of all the tiles	 no participants approved of all tiles	 no participants approved of all tiles	 no participants approved of all tiles

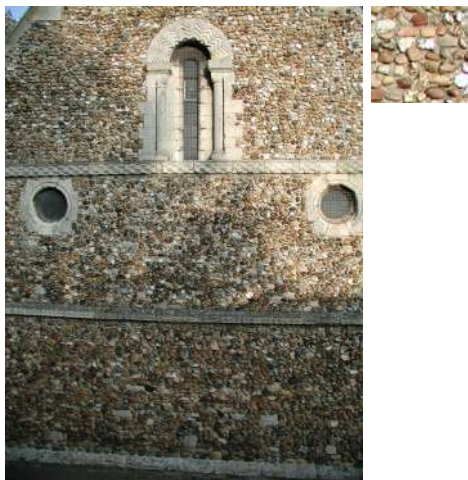


Image by Flickr user snigl3t, under the Creative Common Attribution 2.0 Generic License
<http://flic.kr/p/3zcwdy>


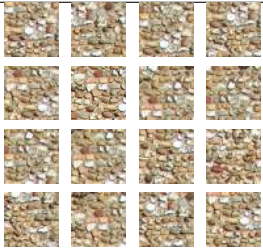
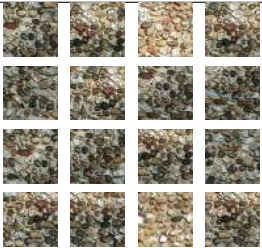

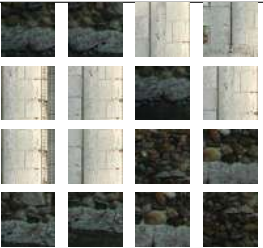





run	2-moments	5-moments	HOG Texture Space	Trivial Feature Space	Autocorrelation Feature Space
1	 7 of 8 participants approved of all the tiles	 7 of 8 participants approved of all the tiles	 no participants approved of all tiles	 no participants approved of all tiles	 no participants approved of all tiles
2	 7 of 8 participants approved of all the tiles	 7 of 8 participants approved of all the tiles	 1 of 8 participants approved of all the tiles	 no participants approved of all tiles	 no participants approved of all tiles



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<http://flic.kr/p/2SPWck>

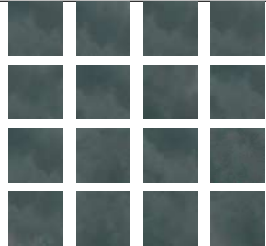
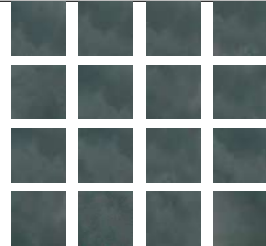

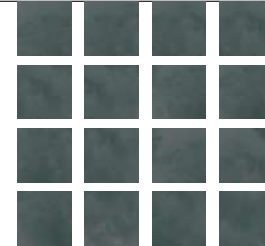
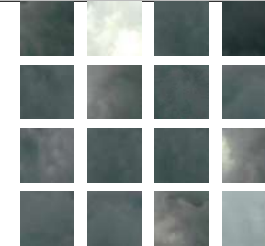
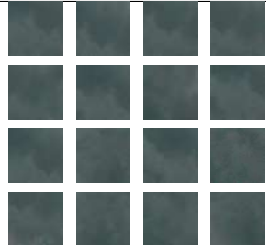
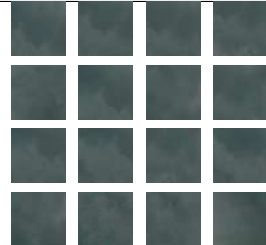

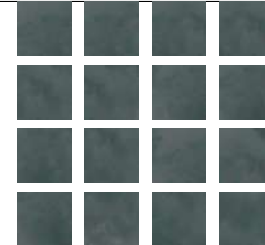
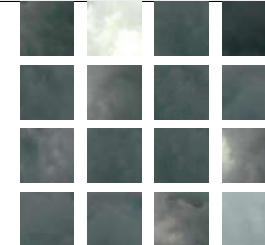
run	2-moments	5-moments	HOG Texture Space	Trivial Feature Space	Autocorrelation Feature Space
1	 6 of 8 participants approved of all the tiles	 7 of 8 participants approved of all the tiles	 no participants approved of all tiles	 7 of 8 participants approved of all the tiles	 no participants approved of all tiles
2	 7 of 8 participants approved of all the tiles	 8 of 8 participants approved of all the tiles	 no participants approved of all tiles	 6 of 8 participants approved of all the tiles	 no participants approved of all tiles



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<http://flic.kr/p/8nFgCE>

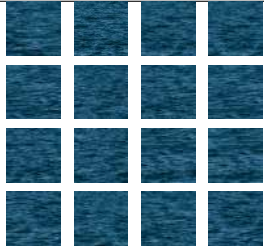
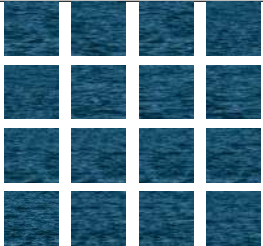
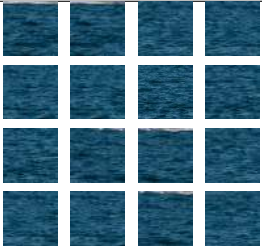
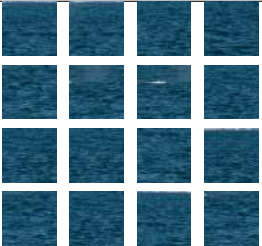

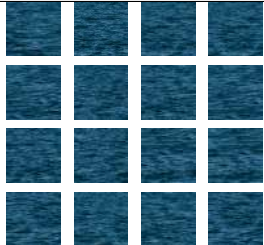
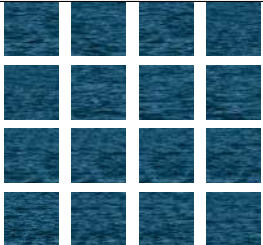
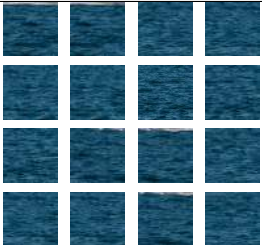
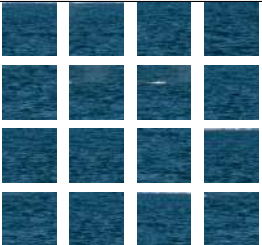

run	2-moments	5-moments	HOG Texture Space	Trivial Feature Space	Autocorrelation Feature Space
1	 7 of 8 participants approved of all the tiles	 8 of 8 participants approved of all the tiles	 4 of 8 participants approved of all the tiles	 1 of 8 participants approved of all the tiles	 no participants approved of all tiles
2	 8 of 8 participants approved of all the tiles	 8 of 8 participants approved of all the tiles	 4 of 8 participants approved of all the tiles	 1 of 8 participants approved of all the tiles	 no participants approved of all tiles



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<http://flic.kr/p/5RTemC>



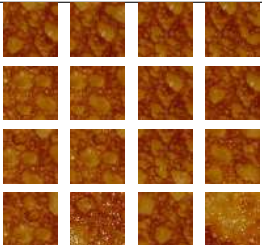
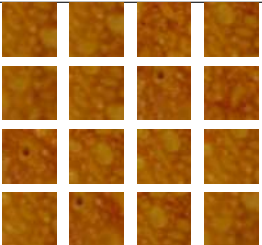


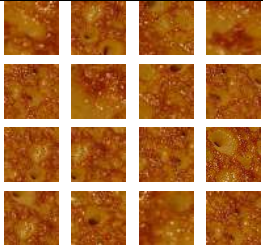
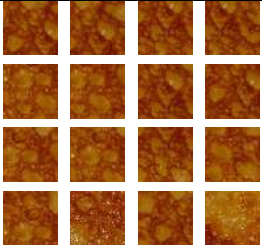
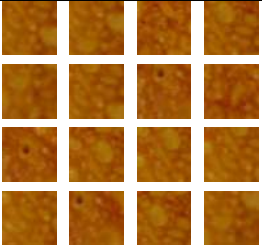

run	2-moments	5-moments	HOG Texture Space	Trivial Feature Space	Autocorrelation Feature Space
1	 3 of 8 participants approved of all the tiles	 1 of 8 participants approved of all the tiles	 3 of 8 participants approved of all the tiles	 no participants approved of all tiles	 no participants approved of all tiles
2	 2 of 8 participants approved of all the tiles	 2 of 8 participants approved of all the tiles	 3 of 8 participants approved of all the tiles	 no participants approved of all tiles	 no participants approved of all tiles



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<http://flic.kr/p/dyHZ2Y>

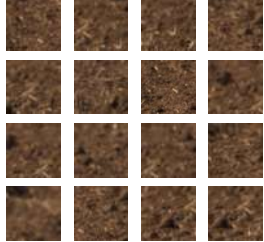
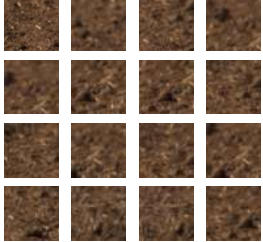

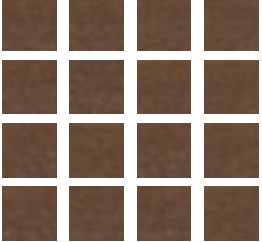

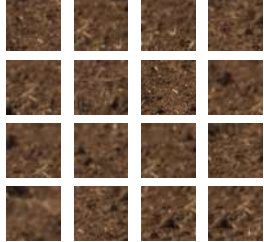
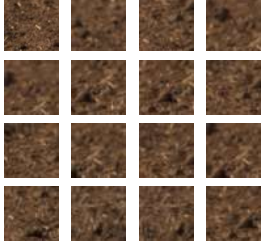

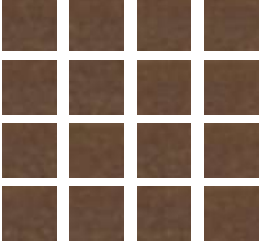

run	2-moments	5-moments	HOG Texture Space	Trivial Feature Space	Autocorrelation Feature Space
1	 2 of 8 participants approved of all the tiles	 4 of 8 participants approved of all the tiles	 no participants approved of all tiles	 no participants approved of all tiles	 no participants approved of all tiles
2	 1 of 8 participants approved of all the tiles	 2 of 8 participants approved of all the tiles	 no participants approved of all tiles	 1 of 8 participants approved of all the tiles	 no participants approved of all tiles



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<http://flic.kr/p/mWSAX>

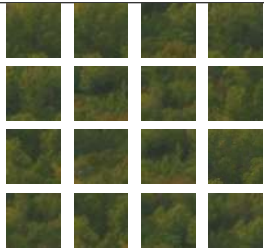









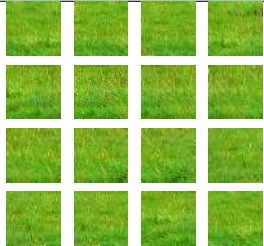
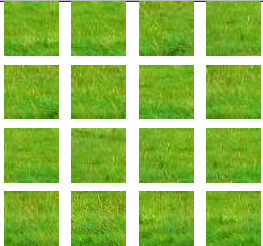

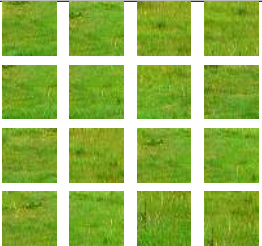

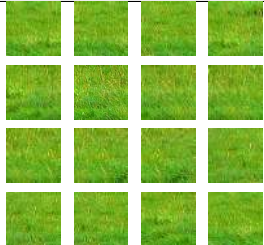
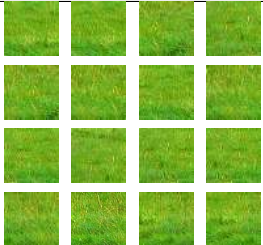



run	2-moments	5-moments	HOG Texture Space	Trivial Feature Space	Autocorrelation Feature Space
1	 6 of 8 participants approved of all the tiles	 6 of 8 participants approved of all the tiles	 no participants approved of all tiles	 6 of 8 participants approved of all the tiles	 no participants approved of all tiles
2	 7 of 8 participants approved of all the tiles	 7 of 8 participants approved of all the tiles	 no participants approved of all tiles	 7 of 8 participants approved of all the tiles	 no participants approved of all tiles



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<http://flic.kr/p/5jY8d4>

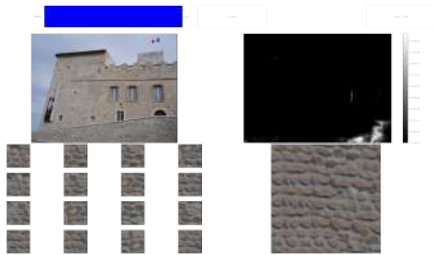
run	2-moments	5-moments	HOG Texture Space	Trivial Feature Space	Autocorrelation Feature Space
1	 5 of 8 participants approved of all the tiles	 6 of 8 participants approved of all the tiles	 no participants approved of all tiles	 6 of 8 participants approved of all the tiles	 no participants approved of all tiles
2	 5 of 8 participants approved of all the tiles	 6 of 8 participants approved of all the tiles	 no participants approved of all tiles	 4 of 8 participants approved of all the tiles	 no participants approved of all tiles

2 Additional Examples

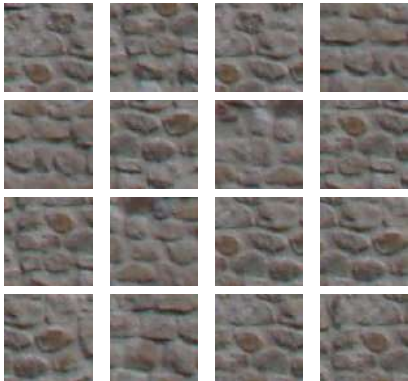
Original Image



GUI



Tile Outputs



Texture Output

