

Image Infilling and Outpainting

Nicholas Bergh and Flint Song

Goals

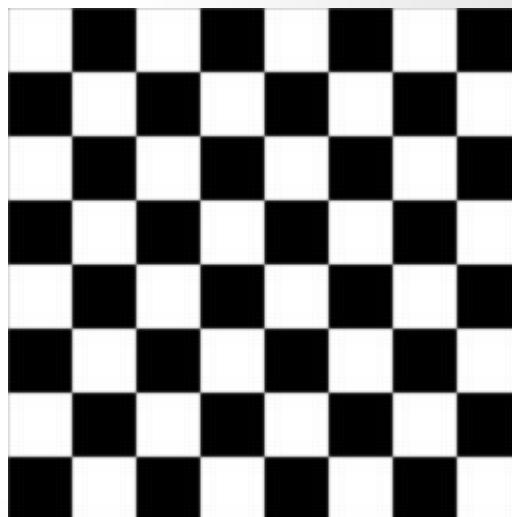
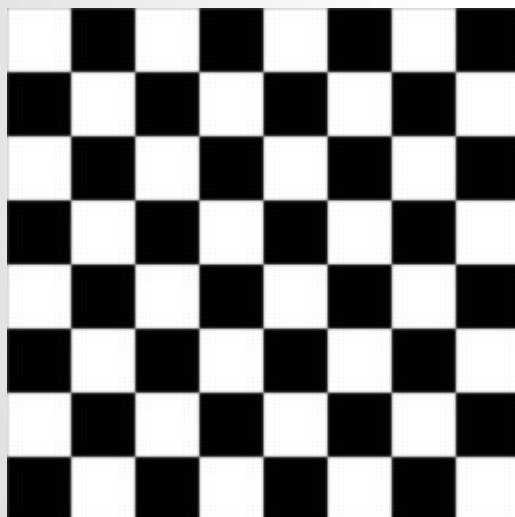
- remove objects from scenes with non-trivial backgrounds
- extend images to make believable textures/scenes

Algorithm Basics

for each pixel on the fill front:

1. determine patch priorities
 - a. multiply gradient · fill front normal by average confidence of pixel's patch
2. find patch with greatest priority
3. find the best match to fill in
 - a. we used SSD of pixel values and gradient components
4. copy patch and update confidence values

Infilling results



Infilling results



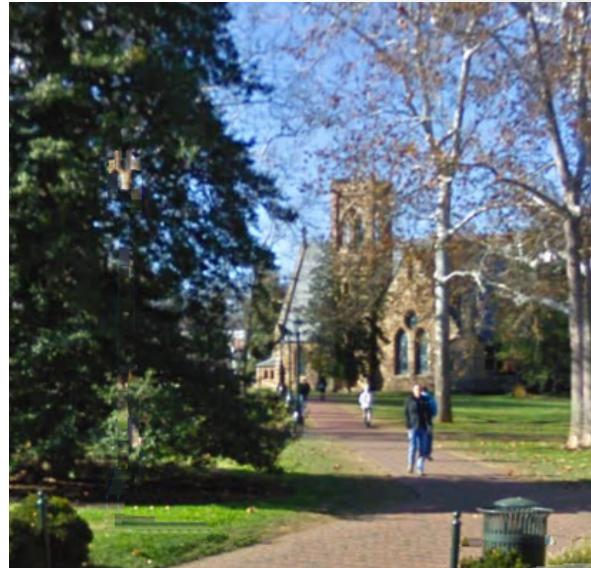
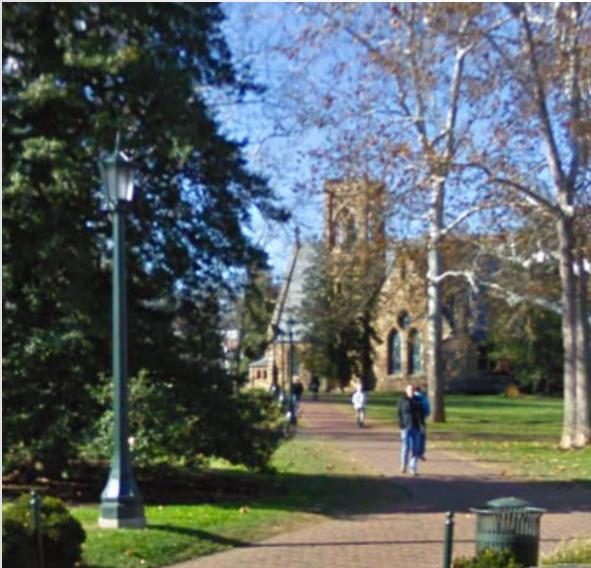
iStock.
by Getty Images



Infilling results



Infilling results

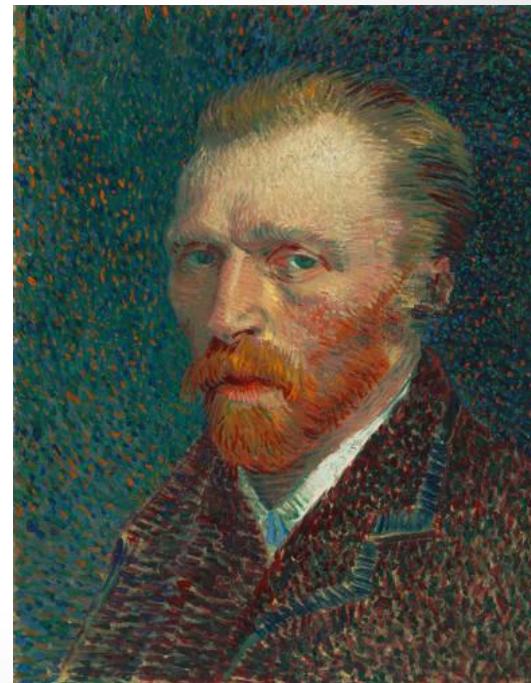
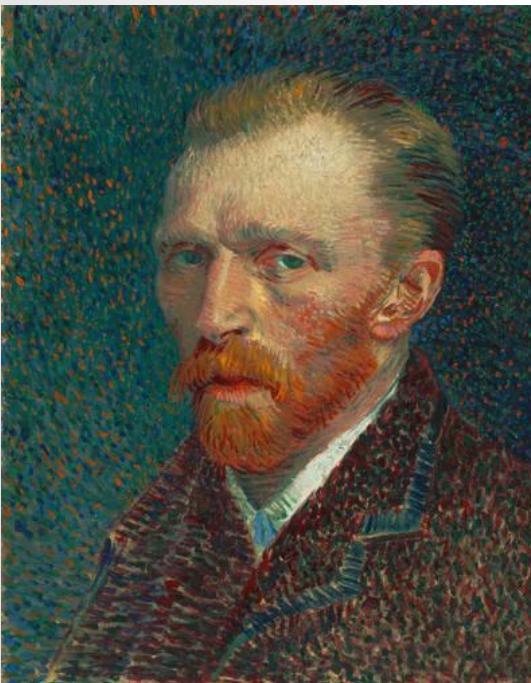


Infilling results

gration officers who make H & C decisions are provided with a ~~§~~ in chapter 9 of the *Immigration Manual: Examination and Consequences*. These guidelines are also available to the public. The parts in the guidelines are relevant to Ms. Baker's application. Guidelines instruct officers about how to decide which cases should be given priority, by carefully considering all aspects of the case, using their own judgment to determine what a reasonable person would do in such a situation. Although officers are not expected to "dive into areas which are not well articulated in the manual or interviews, they should attempt to clarify possible public policy considerations even if these are not well articulated." Guidelines also set out the bases upon which the discretion contained in regulations should be exercised. Two different types of criteria for s. 114(2) decisions are outlined—public policy consideration and compassionate grounds. Immigration officers are instructed, in essence, first, whether a public policy consideration applies, then, whether humanitarian and compassionate circumstances apply. This includes marriage to a Canadian resident, the fact that the person has become established, and has become an "illegal de facto" if the person may be a long-term holder of employment authorization as a foreign domestic. Guideline 9.07 states that humanitarian

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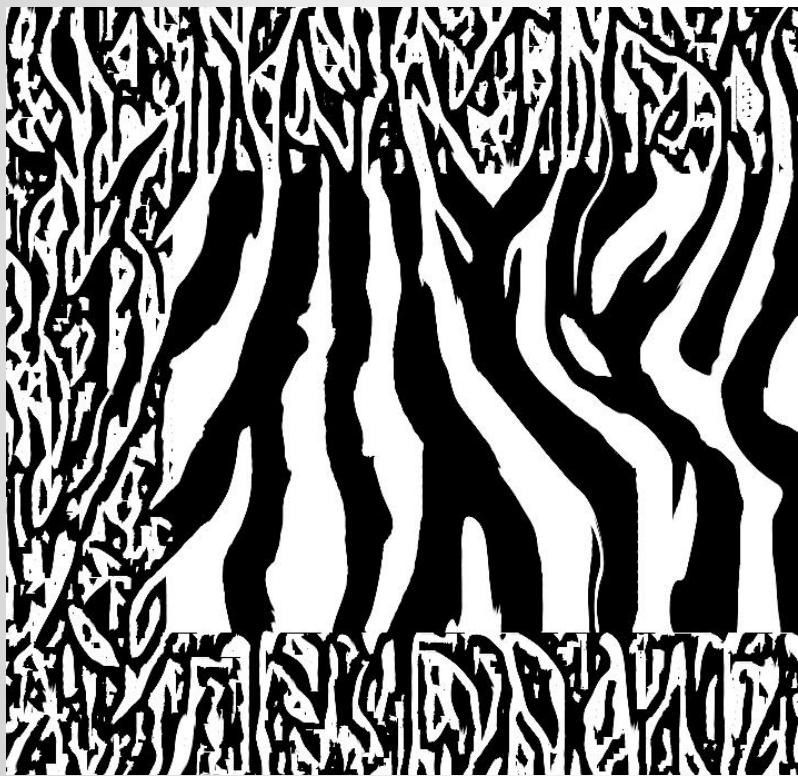
Infilling results



Outpainting results



Outpainting results



Outpainting results



research paper

Region Filling and Object Removal by Exemplar-Based Image Inpainting

A. Criminisi*, P. Perez and K. Toyama †

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com/pubs/67276/criminisi_tip2004.pdf](http://research.microsoft.com/pubs/67276/criminisi_tip2004.pdf)