Discussion

RegionFinder

My findRegions method had one parameter, that being the target color, or the tracking color that was selected. In the Baker image attached, the current regions were found using the maxColorDiff (max color difference) to be the provided 20 units, and the minRegion (minimum size to be considered a “region”) to be the provided 50 units. I noticed that if I wanted a larger region, or more uniform coloring of the bricks, I could increase the maxColorDiff. However, I noticed that when I did this, my flood-filling algorithm would fill in more than just the bricks in the images, as certain pixels were considered to be of the “same color.” As for minimum region size, I found 50 to work pretty well, as anything under 50 pixels would not be worth recoloring, and I noticed that everything that needed to be recolored in the image was generally recolored.

CamPaint

In the context of CamPaint, region growing is more limited. This is due to the fact that the region finding algorithm is acting on a live webcam instead of a still image picture. Since objects in a live image are moving, the region finder finds different regions every frame. Due to this, a region can shrink and grow at any time. Lighting also plays a large role in that in one location a region may be found but in another location the region may not have the same target color and would not be considered the brush. This effects the painting that is painted with the brush later on. To combat this, the minRegion and the maxColorDiff can be tweaked slightly to allow for a region with more give.