

```
function [final_avg_matrix final_indexes] = partition_image_vectorized_gs(I)
%for greyscale images

%these values will depend upon application, but these should be fine in general
N_min = 2;
N_max = 14;

max_total_diff = 0;

for N = N_min : N_max

    [current_total_diff avg_matrix indexes] = test_image_consistency(I,N);

    if(current_total_diff > max_total_diff)

        max_total_diff = current_total_diff;
        final_avg_matrix = avg_matrix;
        final_indexes = indexes;

    endif

endfor

endfunction
```