

Homework 5 Identify Images

Criterion1 - Brush size

In the process of painting, in order to ensure the uniformity of the style of the picture, the painter often uses the same size brush to shape the texture of the picture. We can extract the traces from the picture. By calculating thickness by zonal geometry, different paintings are grouped together.

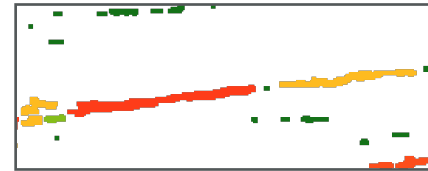
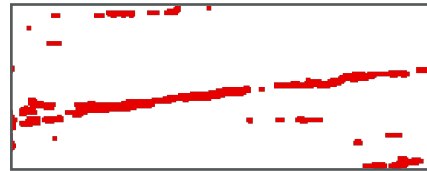
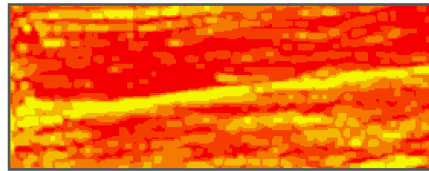
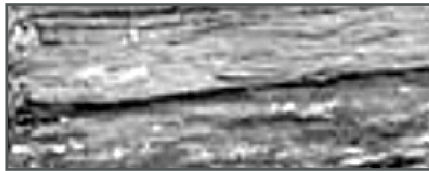


Step 1 - focal statistic
minimnm in the neighborhood
of 3*3

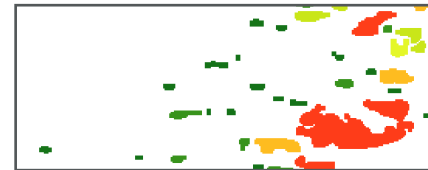
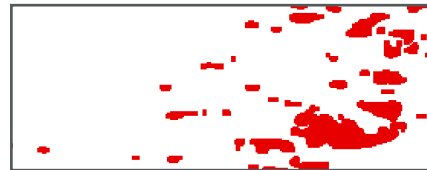
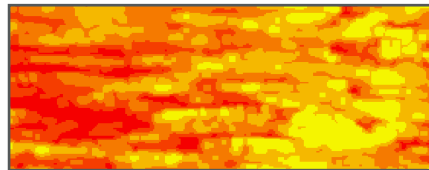
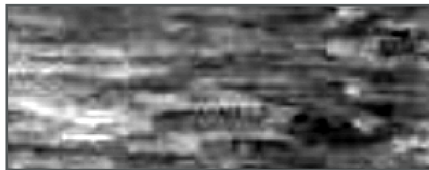
Step 2 - reclassify
natural breaks in 5 grades
lowest grade = 1

Step 3 - region group
+zonal geometry
caculate the thickness

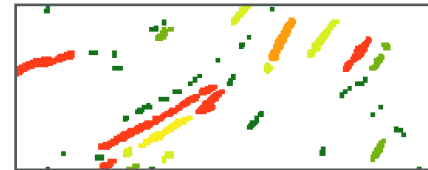
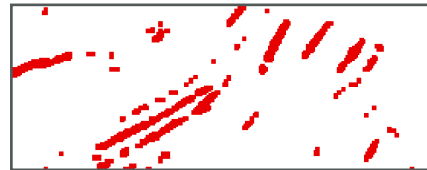
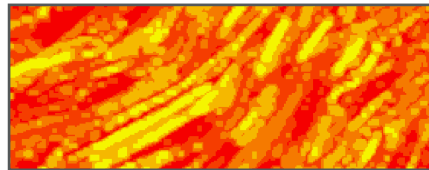
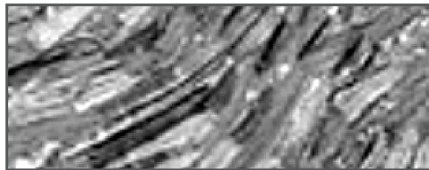
RESULT
Group1 ACD
Group2 BE



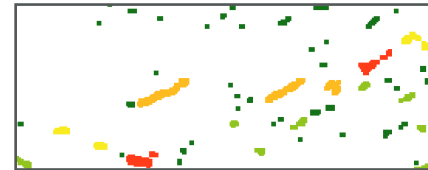
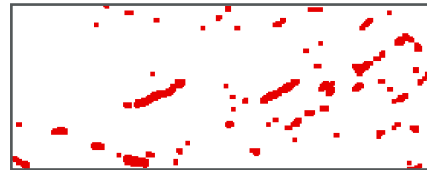
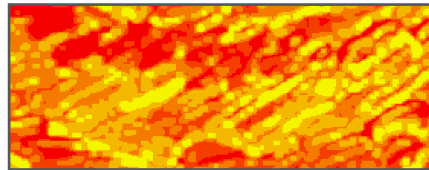
A
Range from
1.5 to 3.707



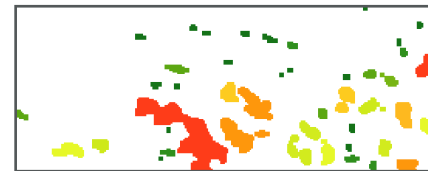
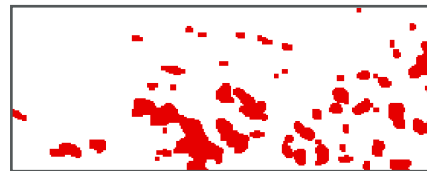
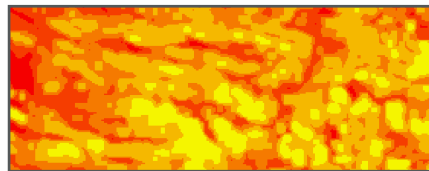
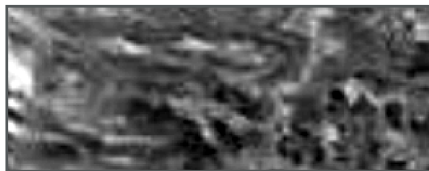
B
Range from
1.5 to 9.535



C
Range from
1.5 to 3.707



D
Range from
1.5 to 3.5

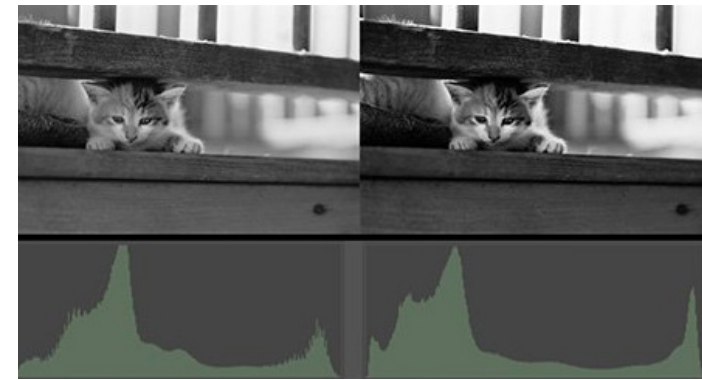


E
Range from
1.5 to 8.363

Homework 5 Identify Images

Criterion2 - Color Contrast

In the process of painting, the color contrast tends to vary from painter to painter without using the painting. In raster analysis, a high contrast means a higher probability of larger differences between rasters in the neighborhood. Using this, we can also distinguish between different paintings

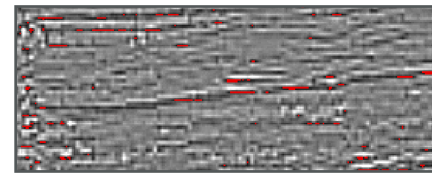
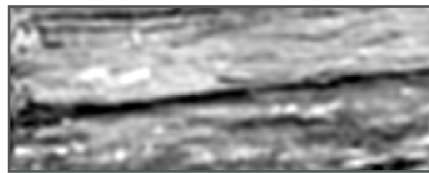
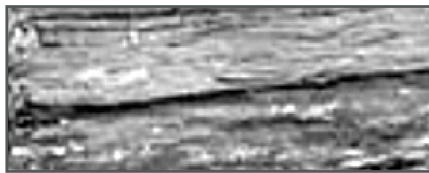


Step 1 - focal statistic
mean in the neighborhood
of 5*5

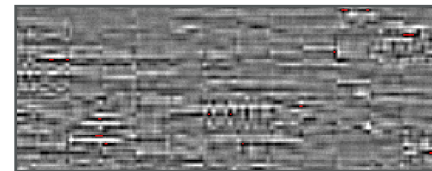
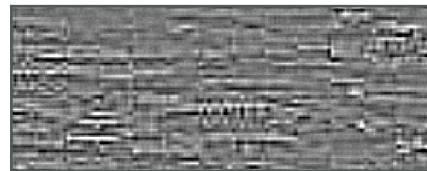
Step 2 - raster calculator
the original layer minus the
processed layer

Step 3 - reclassify
<-1 = 1 count the number
>-1 = Nodata

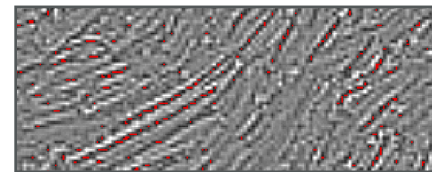
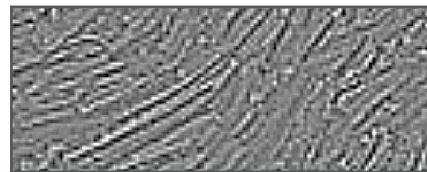
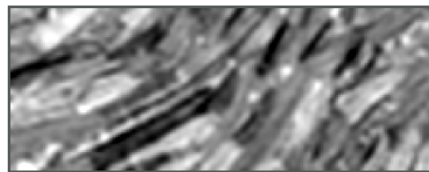
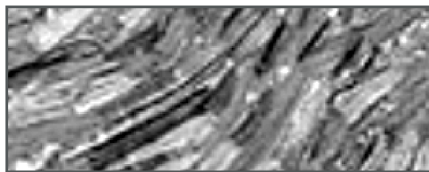
RESULT
Group1 ACD
Group2 BE



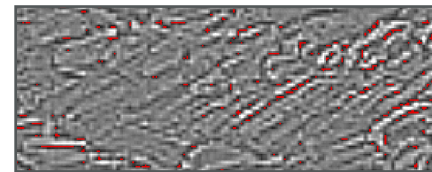
A
Raster quantity
397



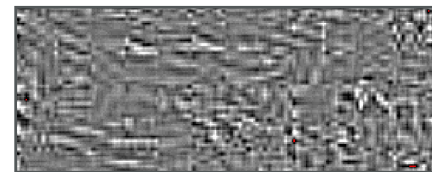
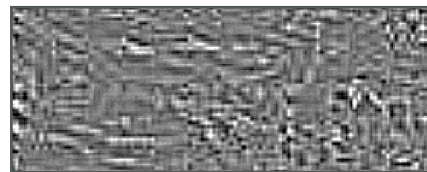
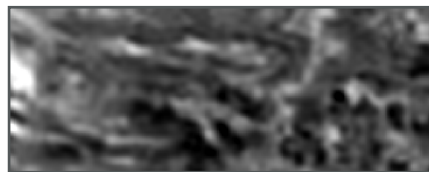
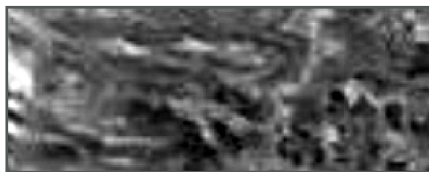
B
Raster quantity
36



C
Raster quantity
453



D
Raster quantity
553



E
Raster quantity
13