Problem1 Report

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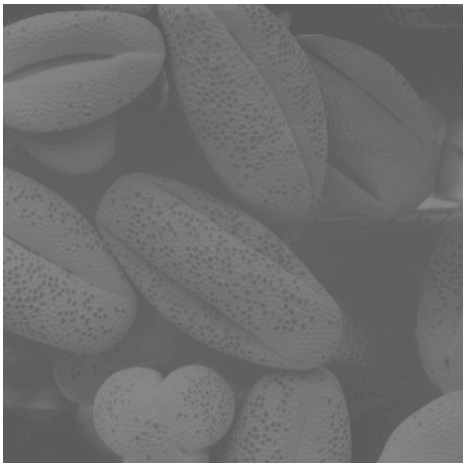
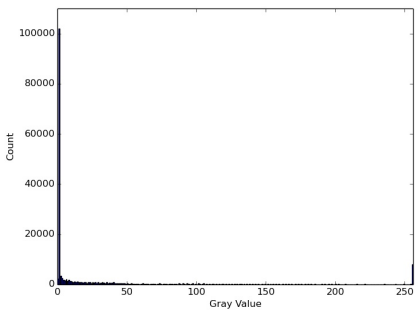
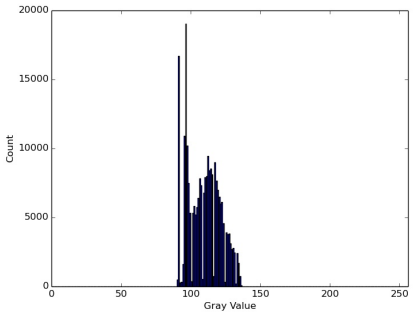
1 Original Figures



These two are the original figures. We can see that figure 1 is too dark and figure 2 is low-contrast. The below histograms show that.

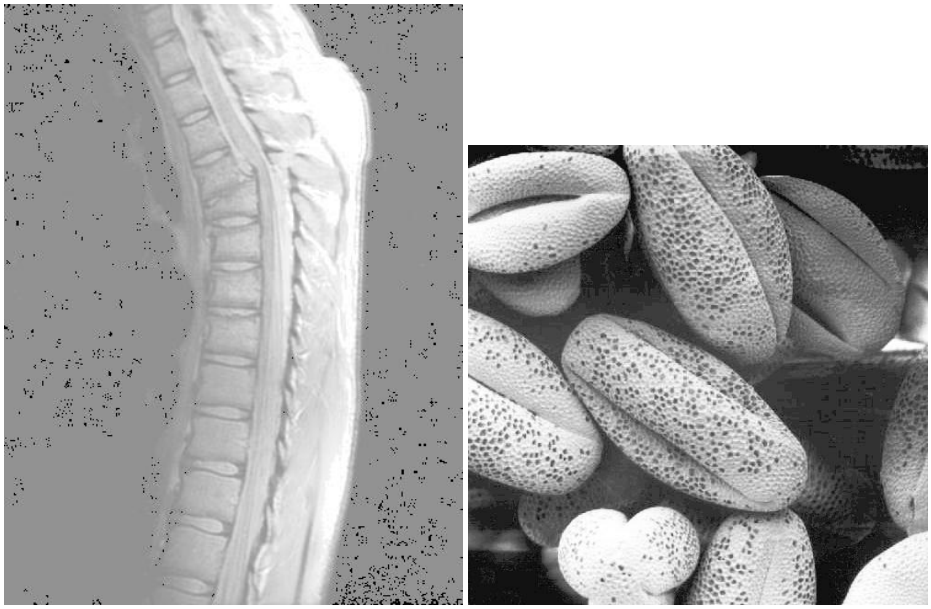




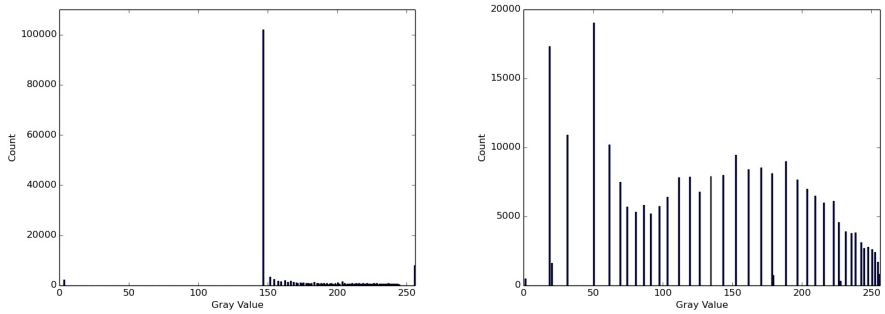
We can see that many pixels of figure 1 have very low gray level, thus figure 1

has many dark areas. About the second histogram, we can see the range of gray levels is very narrow, which means figure 2 is low-contrast.

2 Histogram Equalization Figures



The figures above show the result after histogram equalization. We can see figure 2 is quite good but not figure 1. We can explain these by the following histograms.



Since more that half pixels in figure 1 have gray level 0, we cannot split these pixels by only using histogram equalization, the first histogram shows that. And the second histogram is average, which indicates figure 2 is high-contrast after histogram equalization.