Medical Image Processing Exercise 8 Varun Boodram

This project generates the texture features that can be extracted from the intensity histogram of the images obtained at http://www.isp.appi.keio.jp. This texture feature analysis considers seven features:

- average intensity level (MEN):
- contrast (CNT)
- the variance (VAR)
- skewness (SKW), which is a measure difference from the normal distribution
- kurtosis (KRT), the intensity found in local values
- energy (ENG)
- entropy (EPY)

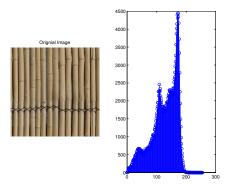


Figure 1: Image 1 and Intensity Histogram

Results of computations for figure 1 $MEN=129.0866, CNT=1.8468e^4, VAR=1.8044e^3, SKW=-1.0201e^{-5}, KRT=8.6429e^{-7}, EGY=0.0083, EPY=4.9694$

Results of computations for figure 2 $MEN=112.3470, CNT=1.3846e^4, VAR=1.2238e^3, SKW=-1.2279e^{-5}, KRT=1.9437e^{-6}, EGY=0.0085, EPY=4.9270$

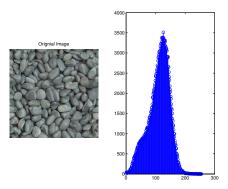


Figure 2: Image 2 and Intensity Histogram

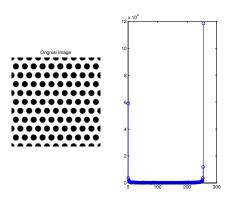


Figure 3: Image 3 and Intensity Histogram

Results of computations for figure 3 $MEN=164.6297, CNT=4.0155e^4, VAR=1.3052e^4, SKW=-3.9799e^{-7}, KRT=8.5457e^{-9}, EGY=0.2572, EPY=2.5825$

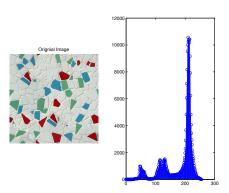


Figure 4: Image 2 and Intensity Histogram

Results of the computations for figure 4 $MEN=186.7296, CNT=3.7173e^4, VAR=2.3053e^3, SKW=-1.3701e^{-5}, KRT=7.9836e^{-7}, EGY=0.0202, EPY=4.4584$

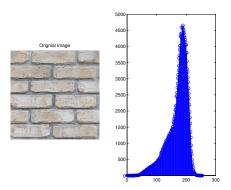


Figure 5: Image 5 and Intensity Histogram

Results of the computations for figure 5 $MEN=173.2691, CNT=3.1135e^4, VAR=1.1124e^3, SKW=-3.2631e^{-5}, KRT=3.4588e^{-6}, EGY=0.0109, EPY=4.7532$