

CE671A:Introduction to remote sensing

Home Assignment I: Histogram Equalization

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1 Results and discussion

1) Given image

Original Image



Figure 1: Given Original Image

2) Histeq Function applied image

histeq function applied Image



Figure 2: Histeq Function applied image

3) Histogram equalization code generated image

Program Histogram equalized Image



Figure 3: Histogram equalization code generated image

4) Both images displayed side by side

Histeq function applied image



Program applied histogram equalized image



Figure 4: Both images displayed side by side

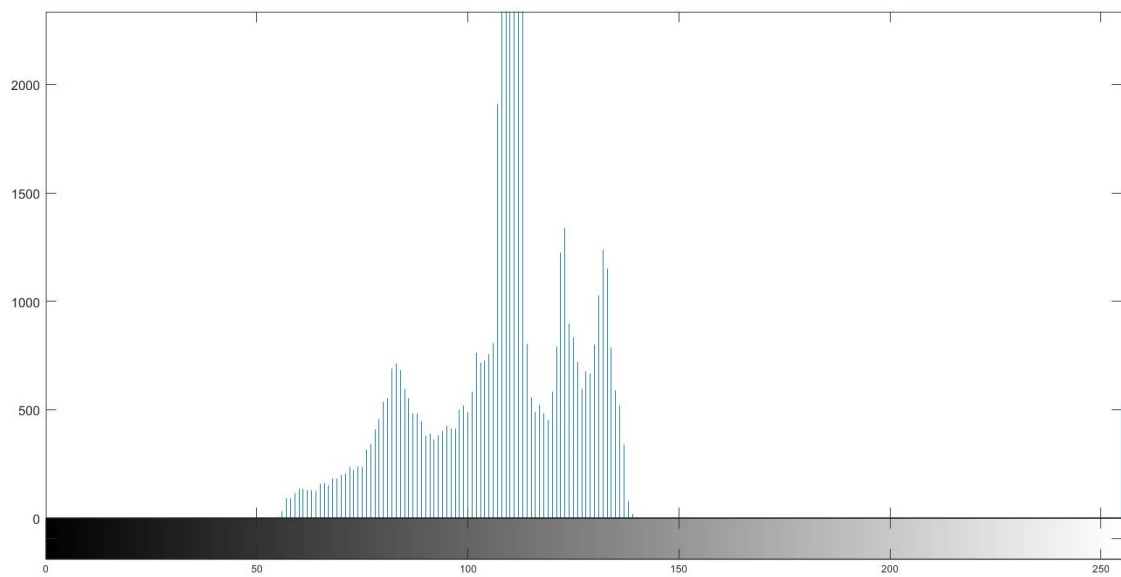
5) Histogram of original image

Figure 5: Histogram of original image

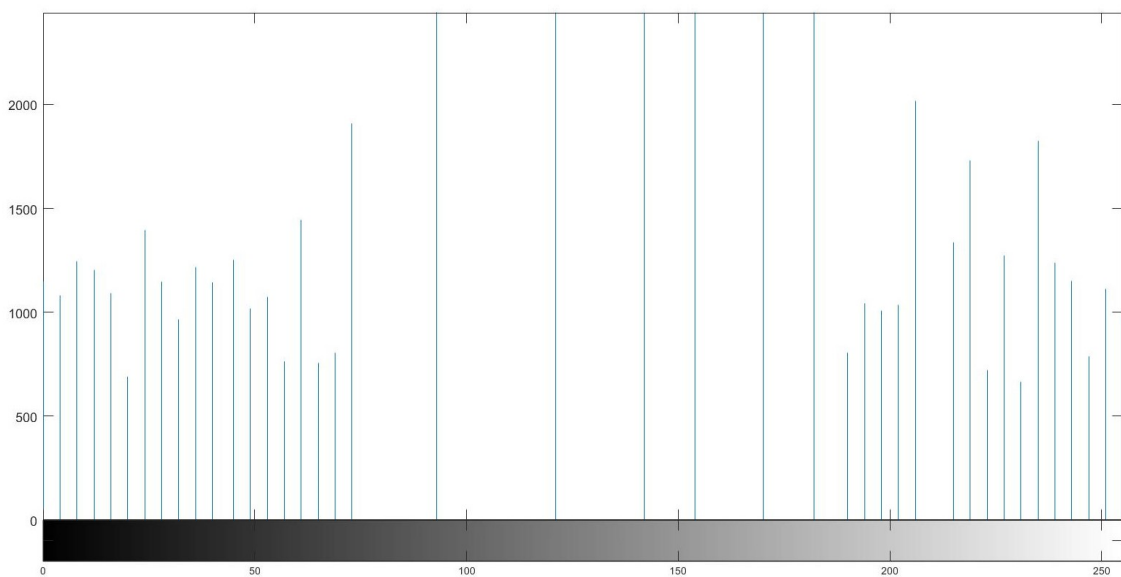
6) Histogram of histeq function applied image

Figure 6: Histogram of histeq function applied image

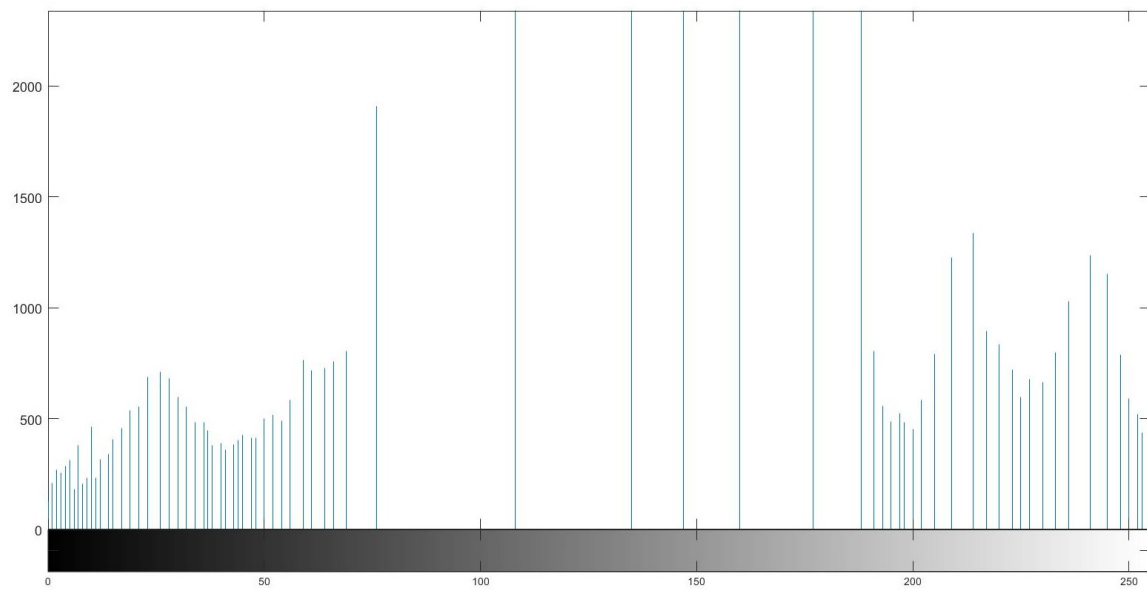
7) Histogram of code generated histogram equalized image

Figure 7: Histogram of code generated histogram equalized image

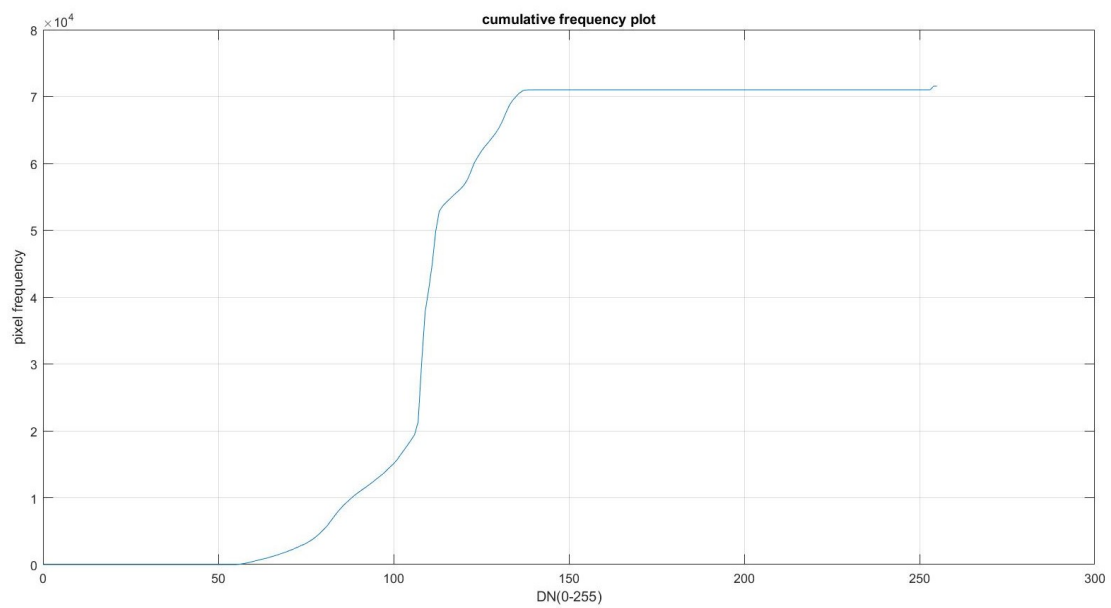
8) Cumulative frequency of DN plot of original image

Figure 8: Cumulative frequency of DN plot of original image

9) Cumulative frequency of DN plot of histogram equalized image

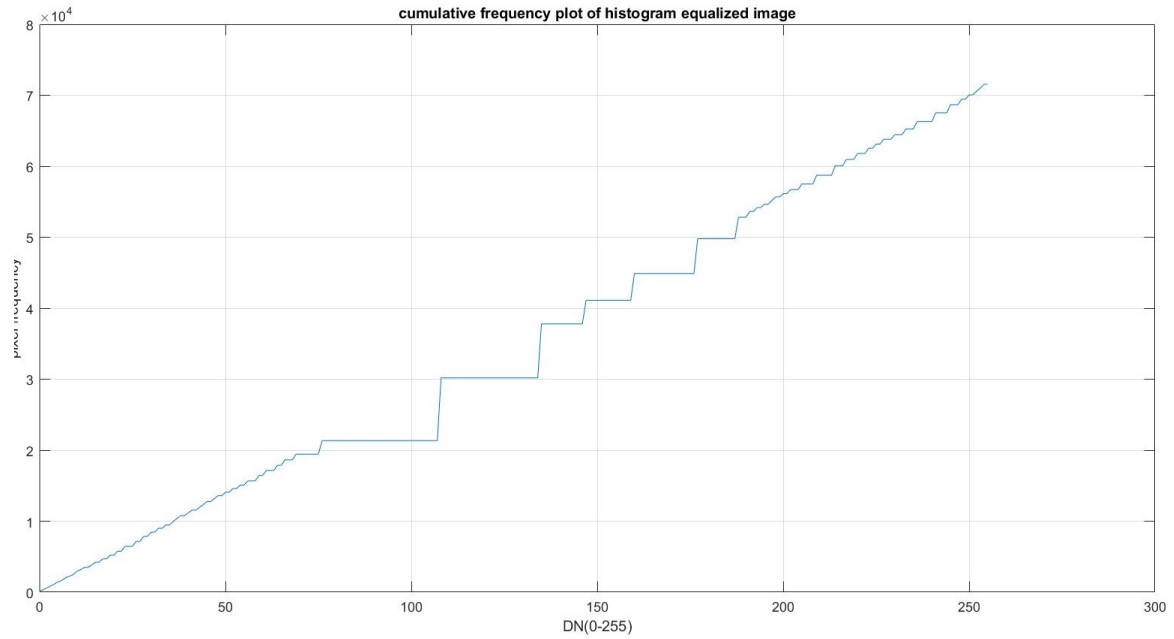


Figure 9: Cumulative frequency of DN plot of original image

1.1 Conclusion

Histogram equalization of an image can be done by following step wise procedure discussed in class by coding the same in MATLAB. Results of histogram equalized image by writing code and the one generated by histeq function are highly comparable.