

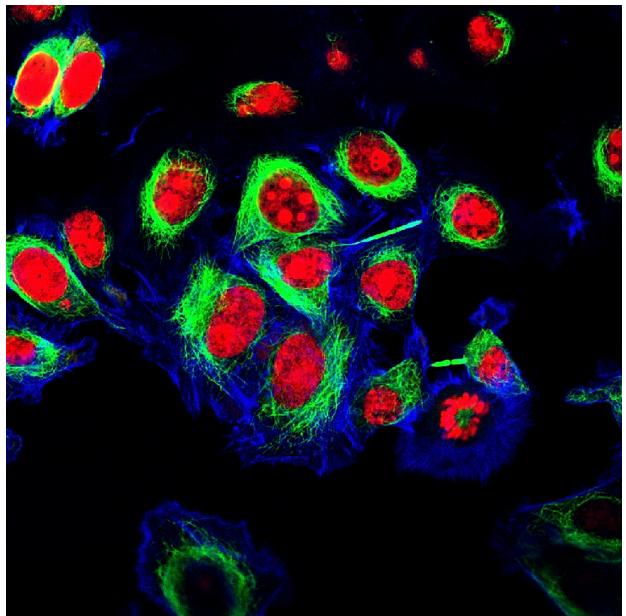
Abstract

The first task of this homework assignment was to design a Python module that has the capability to transform an RGB image into a grayscale image using a specified formula and store it on the disk. The second task was to design a Python module that has the capability to convert the grayscale image from the first task into a binary image using a user-provided threshold value, and then store it on the disk. The resulting modules I created accomplished this task.

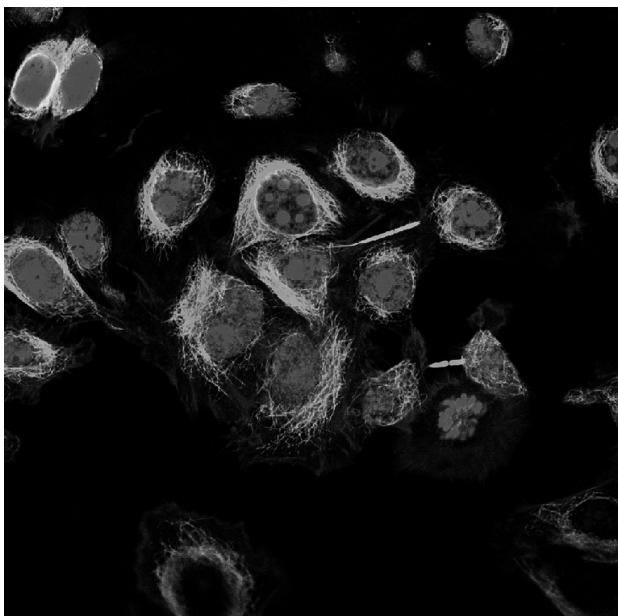
Introduction

The experiments to be performed are to convert an image from RGB to grayscale using a custom function, and then to binarize that grayscale image using a user-provided threshold.

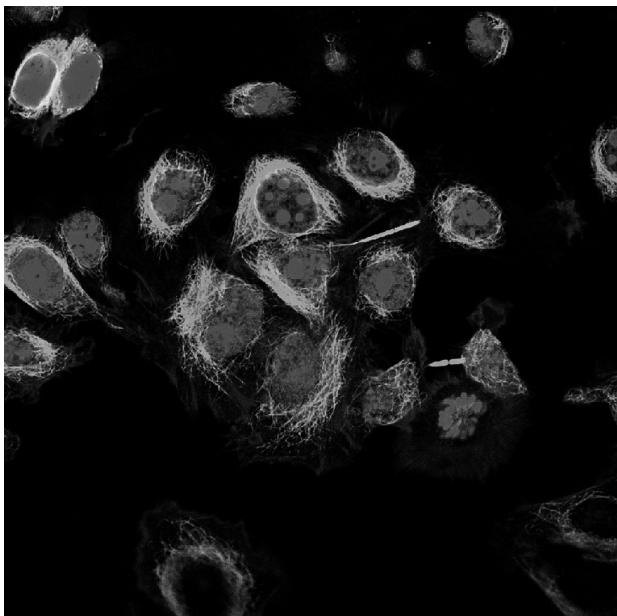
Experiments



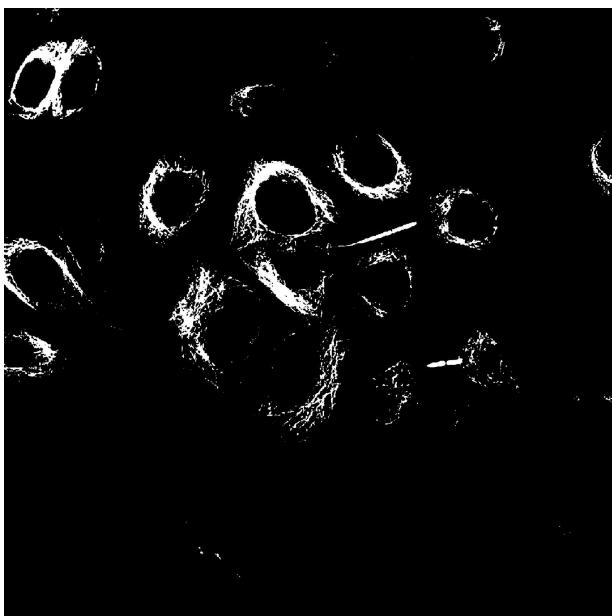
Input RGB Image



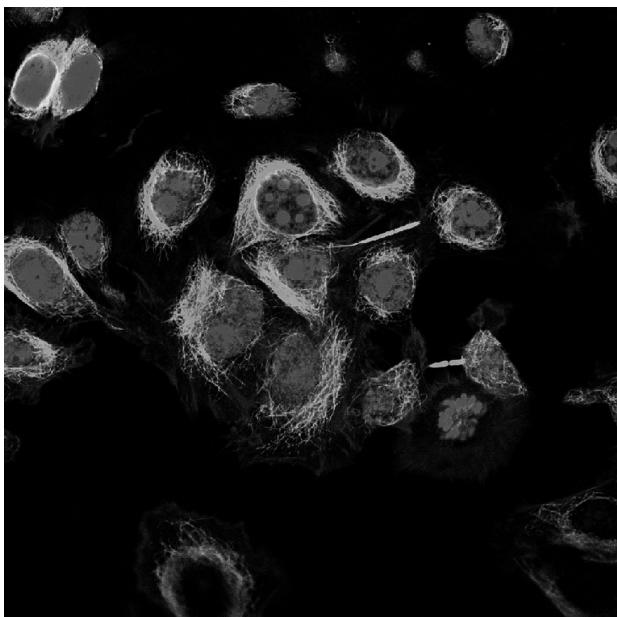
Output Grayscale Image



Input Grayscale Image



Output @ Threshold = 127



Input Grayscale Image



Output @ Threshold = 180

Conclusions

In conclusion, the provided Python code accomplishes the tasks presented in the assignment.