Detection of cells

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1 Introduction

Cell differentiation is usually a time lapse studied through cell imaging. Here is a small exploration on the cell numbers on specific days. In this part, the dendrite is the object we detect. However, using the haar-like feature, it is also possible to detect cultured cells.(More features can be included.)

2 ROI label and training

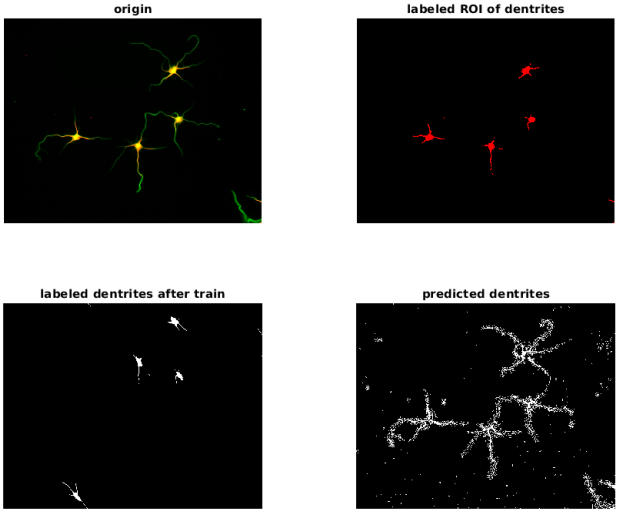
Through using Haar-like features, which usually include horizontal, vertical and diagonal oriented features, we are able to detect certain patterns from the image. As cell boundaries are usually brighter in the greyscale images, other tissues stained with specific color or emmitting at certain wave length can also be detected with its color difference at boundary. Here, the example image sized (1030*1300) is segmented into 6 frames (171*216) and features extracted through the mentioned three directions. Finally, we get the detected cells as following:

3 Conclusion

"I always thought something was fundamentally wrong with the universe" [1]

References

[1] D. Adams. *The Hitchhiker's Guide to the Galaxy.* San Val, 1995.



Detection.png

Figure 1: The dendrite

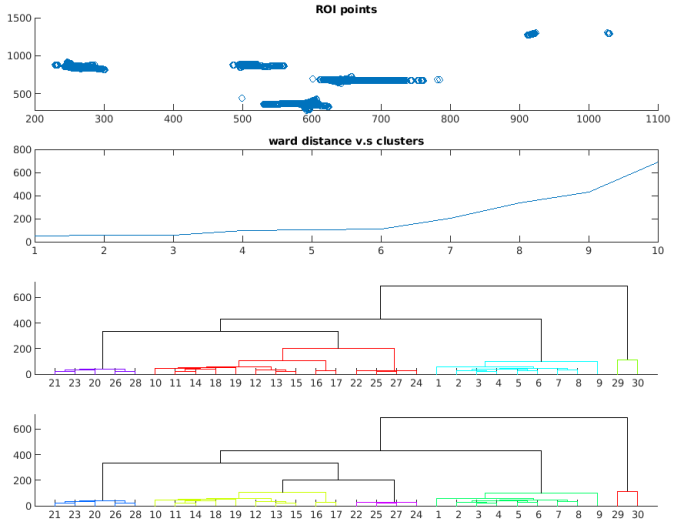


Figure 2: clusters