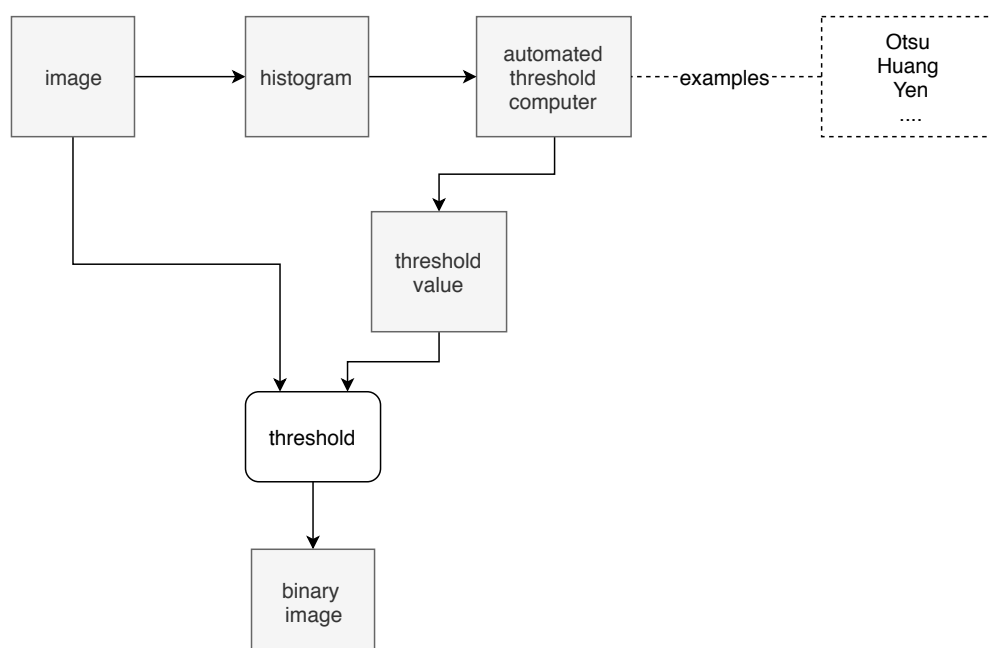


Automated Thresholding

Automated global thresholding

- When batch processing many images one fixed threshold may not always suffice to segment objects. In such cases automated thresholding may be necessary.
- Most automated thresholding methods work on the image histogram, i.e. they do not take spatial context into account.
- Some advanced knowledge is required when choosing the automated thresholding method. For example, some methods work very well when only few percent of the pixels are foreground pixels, while methods work better when half or more of the pixels are foreground.
- The following website contains links to many relevant methods: https://imagej.net/Auto_Threshold

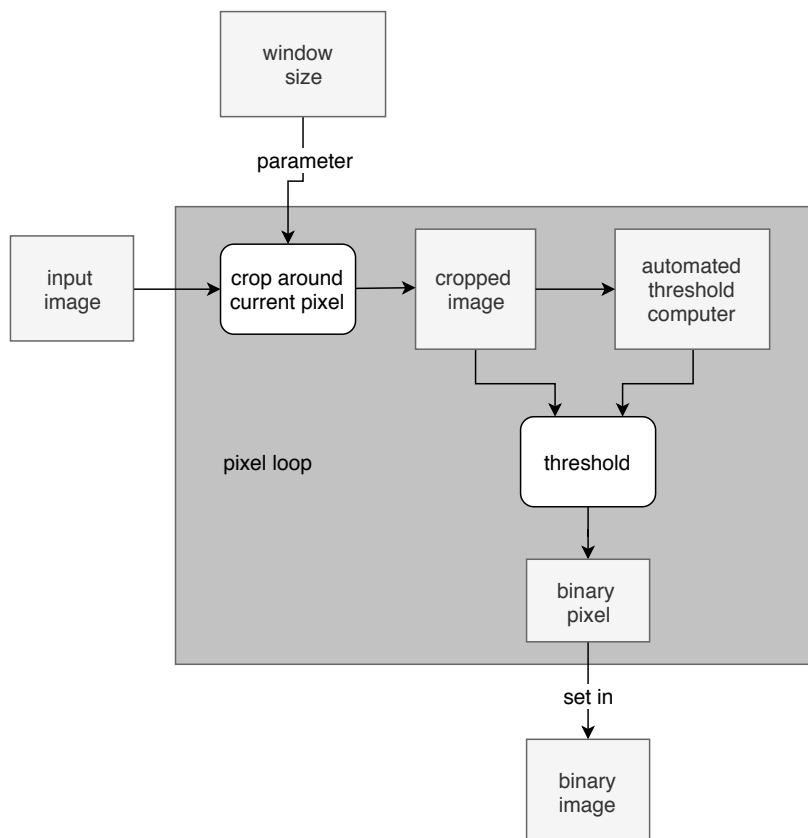


Activities

- Try different automated thresholding methods on different images (make sure to also try with an image containing only "noise").

Automated local thresholding

- Conceptually, automated local threshold means running an automated (global) threshold in small windows across the image and only changing the central pixel of the current window.
- Automated local thresholding can be useful when (i) there is an uneven image background or (ii) when then the objects do not have the same intensities.
- In practice however, the implemented local threshold methods are sometimes entertaining different ideas for finding the threshold that the global implementations.
- A summary of local threshold algorithms with references can be found here: https://imagej.net/Auto_Local_Threshold



Activities

- Explore different auto-local-threshold methods on different input data.