Resource: Bayesian blocks -Histogram Bin Size Selection



Jakub Sevcech

21st September 2017



Sometimes, it is hard to select proper bin number of bins when plotting histograms



- With too few bins, you lose too much information
- With too many bins, the data is too noisy

Astropy library provides methods to automatically determine the proper bin size / number



http://docs.astropy.org/en/stable/visualization/histogram.html

Bayesian methods can produce variable bin size adjusted to data



- Bayesian blocks methods change the bin size in relation to change in data.
- Important details have small bins to highlight the shape
- Stable sections have big bin sizes to limit amount of the detail to take into account

- Library: http://docs.astropy.org/en/stable/visualization/histogram.html
- Blog post with algorithm explanation: http://jakevdp.github.io/blog/2012/09/12/dynamic-programming-inpython/
- Paper with application of the idea in time series processing: https://arxiv.org/abs/1304.2818