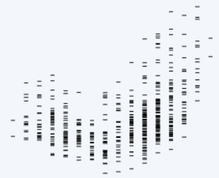
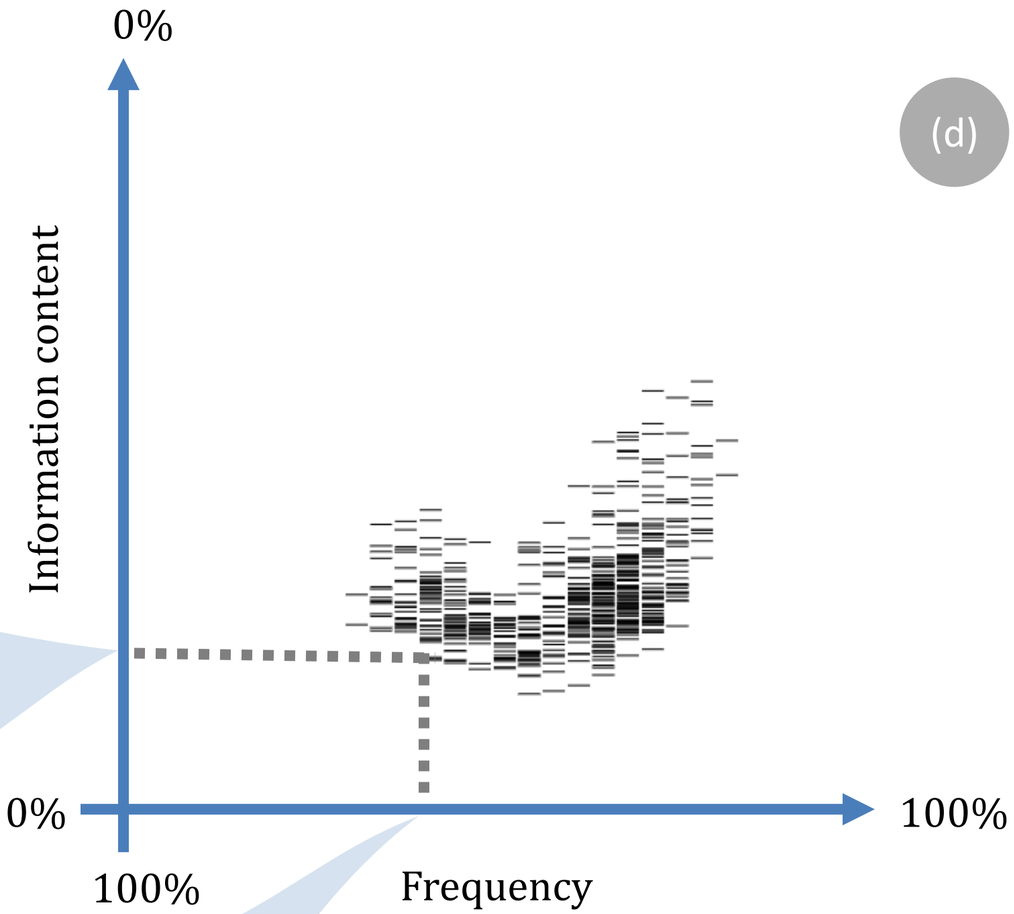
(e)

(f)

(g)



(d)



(b)

$$\sigma(s) = 100 - \left(\frac{\sum_{u=1}^{|s|-1} \left(\frac{\sum_{i=1}^{|s|-u} f(x_i, x_{u+i})}{(|s| - u) \times 100} \right)}{(|s| - 1)} \right)$$

(c)

$$CG\% = \frac{(G + C)}{sw} \times 100$$

(a)

GTAAAAATCTAGTTTTCCGTACTCTGTCCCCTTTTTAATCCTTCTCTGAATGGGTGTCCTTGATTCACTGACATT
TCCTAATTAACCAAGTTCTGCCAAGTTTCACATGAAACTTGGGGAACCGATTTCATTCCCCCAGTATCACCCTGT
GGCGCCACCTTCCGGAGCTGTGAGGAAACTCCGGACTTCCCCCCAACACCGCCCCCTCCCTCCACCCTCGGTCTC
CGCTTTCTGCGCTCTGCCGCGTTGGTTTTCGGAGGTGTCTGGGCGCATGCGCTTTGGACGGGCCGCCTAGCCTAG
GAGAGACTACAATTCCCAGAAGACAGTGCGAAAGAAAAAAAAAATCCCGCGGTCCGTGGGGGTGGGAGAAATAAA
CGCTCGCGAGAGAACGAGGTTCAGGCGGCTGCACGAAGGGGGTGGAGGGGGGCTGGAGAGAGTGAGGAGGAAGGG
GAGGAGGTGCCGTCCCACAATACCAGGCGGGAGGGCGGGTAGGCGGTTTGTATCCGGGCTGTGAGGTGCTCGGAG
CCTCGGCGGACCTTGCTGCCTCTGTCTCTTTAACGCGAGAGGAAGCGATGCAGAGGGGTGGAAAATGGCAGAGCT

The objective digital stain method

The objective digital stain method. (**a**) shows the promoter sequence of a gene and the contents of the first sliding window. (**b**) indicates the computation method for the information content on the current sliding window. (**c**) indicates the CG% content on the current sliding window. (**d**) Shows an objective digital stain (ODS) - a chart on which dots/lines are plotted using the values from a and b. For sufficiently long sequences the set of dots/lines form a characteristic pattern/shape which is particular to the sequence taken into consideration. (**e**-**g**) shows different embodiments of the ODS, resulting from various graphical representations of a “point” on the image. Note that there is no special position from which the first dot/line can start. It all depends on the content of the sliding windows.

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