Brenda's presentation

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Let us suppose that a sequence of letters with values in a given alphabet is described by a semi-Markov chain, i.e., let us suppose that the alphabet will be A = a, b, c, and the genomic sequence could be "aacbbbacccacacacabaaaabbbaabaccccaacccbcc ...". We can be looking for the word w = abac in this sequence, this w word could be, for example, the responsible for the production of a particular protein, a genetic disorder, a specific malformation, etc. Achieving this task over a sequel of a few hundred thousand letters is a very cumbersome job to do by simple inspection. The automatic search of this word is therefore indispensable. Indicators, such as the average number of occurrences of the word in the given sequence, the average number of positions up to the occurrence of the word in the genomic sequence could be useful to accomplish the objective. The goal in this presentation is write the semi-Markov kernel of the prefixes of the word in function of the semi-Markov kernel of the letters.

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