Information Theory and Data Mining

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Assignment no. 1

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General Recommendations

The project should be carried out using Python. Good programming discipline should be followed when writing the Python code. This means that the variable names should be logical, the code must be commented and it should be written in such a way that it is easy to follow and understand. Figures should have appropriate titles and axis labels. The software implementation should find a solution which minimizes the processing time over a set of equivalent methods..

Project

- write a function called "entropy" which computes the entropy of a generic discrete random variable given its probability mass function $[p_1, p_2, ..., p_N]$.

- write a script called "test_entropy2" which computes the entropy for a generic binary random variable as a function of p_0 and plots the entropy function.

- write a script called "test_entropy3" which computes the entropy for a generic ternary random variable as a function of p_0 and p_1 and plots the entropy function.