Entropy

1 Why

2 Definition

The entropy of a distribution is the expectation of the negative logarithm of the distribution under the distribution.

2.1 Notation

Let R denote the set of real numbers. Let A be a finite set. Let $p : A \to R$ be a distribution. The entropy of p is

$$-\sum_{a \in A} p(a) \log(p(a)).$$

We denote the entropy of p by $H(p)$.