Information Theory

Problem Set 10 - Advanced Information Measures

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1. (a) Given a set of secret values, we can define the set of all posible probability distributions over this set of secret values. A state of knowledge of a agent about the secret (or state of the world) can be defined as one of such probability distributions that the set of posible secrets can have.

   (b) A information measure is a mapping from a state of knowledge to a real number, i.e, it's a function $f : \mathcal{X}\mathbb{D} \to \mathbb{R}$, where

2. 2

References

[1] David J. C. MacKay. *Information Theory, Inference and Learning Algorithms*. 7th edition, 2005.

[2] Thomas M. Cover and Joy A. Thomas. *Elements of Information Theory 2nd Edition (Wiley Series in Telecommunications and Signal Processing)*. Wiley-Interscience, July 2006. ISBN 0471241954.