

Introduction to Machine Learning



Information Theory

Entropy and Optimal Code Length

Learning goals

- Know that source coding is about encoding messages efficiently

Learning goals

- Know how to compute the average length of a code
- Know that source coding is about encoding messages efficiently
- Know that the entropy of the source distribution is the lower bound for the average code length of a code
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0 0 0 1 0 0 1 1

encoded string

00 01 00 11

codewords

0 0 0 1 0 0 1 1

dog cat dog bird

source symbols

00 01 00 11

codewords

dog cat dog bird

source symbols