

COM6115 L3

Number of participants: 163



1.

The information content $I(s)$ of a symbol s is the number of bits in which s should be coded. Which of the following are correct? (More than one answer may be correct)

12 correct answers
out of 90 respondents

$I(s) = \log(P(s))$



14%

13 votes



$I(s) = -\log(P(s))$



79%

71 votes

$I(s) = \log(1-P(s))$



16%

14 votes



$I(s) = \log(1/P(s))$



21%

19 votes

$I(s) = -\log(1/P(s))$



14%

13 votes

$I(s) = -\log(1-P(s))$



12%

11 votes



2.

The information content $I(s)$ of a symbol s increases as the probability $p(s)$ decreases.

57 correct answers
out of 78 respondents



True



73%

57 votes

False



27%

21 votes



3. Entropy H sets ... for compression

52 correct answers
out of 83 respondents



a lower bound



52 votes

an upper bound



31 votes



4. More than one correct answer. Huffman coding...

10 correct answers
out of 85 respondents

results in lossy compression.



8 votes



uses a code tree.



81 votes

is more effective for character-based models than word-based models.



24 votes



is suitable when the probability distribution of the symbols is static.



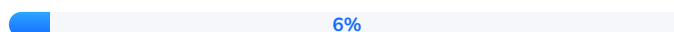
59 votes

is not a required step for applying canonical Huffman coding.



9 votes

is a dictionary compression method.



5 votes



is a symbolwise compression method.



40 votes



is a static compression method.



37 votes

is a semi-static compression method.



9 votes

is an adaptive compression method.



28 votes



5. More than one correct answer. Arithmetic coding...

0 correct answer
out of 0 respondent

is faster than Huffman coding.

0%

0 votes

uses a coding tree.

0%

0 votes



achieves compression close to the lower achievable bound as set by entropy.

0%

0 votes



does not support random access.

0%

0 votes