LE1.6

LE1.6.1: Huffman Encoding

1/1 point (ungraded)

A Huffman code assigns a 3-bit codeword for message A and a 4-bit codeword for message B. It is known that A and B have different probabilities, and hence carry different amounts of information. Which message carries more information?

More info in:

- ○ A
- ◉ B
- ○ Can't tell

✔

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LE1.6.2: Huffman's Algorithm

5/5 points (ungraded)

After spending the afternoon in the dentist's chair, Ben Bitdiddle has invented a new language called AEIOU made up entirely of vowels (the only sounds he could make with someone's hand in his mouth). The AEIOU alphabet consists of the five letters "A", "E", "I", "O", and "U" which occur in messages with the following probabilities:

Letter	**p(Letter)**
A	0.11
E	0.25
I	0.20
O	0.35
U	0.09

Use Huffman's algorithm to construct a variable-length code that minimizes the expected number of bits used to encode each letter of a message one-at-a-time.

Please enter the *length* of the variable-length code for each letter.

Length of encoding for A (in bits): 3 ✔

Length of encoding for E (in bits): 2 ✔

Length of encoding for I (in bits): 2 ✔

Length of encoding for O (in bits): 2 ✔

Length of encoding for U (in bits): 3 ✔

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LE1.6.1 Which is the relation between probability and amount of information?

Calculator

The exercise says *"A Huffman code assigns a 3-bit codeword for message A and a 4-bit codeword for message B. It is known that A and B ...

Can't we have further probabilities tables to practice more with Huffman's trees? **2**

I understood the material in this lecture but some of my answers to the exercises followed another path. In particular, my Huffman's tree wa...

O? **7**

Wouldn't O be on a separate branch with a 1 bit value? Can someone help me clarify why this is not?

O **2**

I have the same query.. why do we need it be 2 bit when it can be represented by 1?

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