HKUSTx: ELEC1200.2x A System View of Communications: From Signals ...

Lab 1 task 3

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discussion posted a day ago by AlbertYSTang

I have no idea about building the dictionary,. Anyone can help? thx!

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WordyAllen

a day ago

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Refer to the example in the Hufman slides.They really upped the ante in part 2 of this course, in terms of lab difficulty.

amen

posted a day ago by LaurieFoster

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KarenWest

about 20 hours ago

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I have questions on Lab 1 Task 3 as well. I tried following the slides on Huffman coding. I tried this dict:

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```
    dict = {[0 0 0 0 0 0 0 0 0 1], [1],
[0 1], [0 0 1], [0 0 0 1],...
    [0 0 0 0 0 1], [0 0 0 0 0 0 0 1],
[0 0 0 0 0 0 1], [0 0 0 0 0 0 0 0
1],...
    [0 0 0 0 0 0 0 0 0 0 1],[0 0 0 0
1]};
```

It came up with a Huffman Code Length of 121987, so an improvement from the original code, but when I submitted it for grading, knowing it has to go down to 117374, it gave me an error and said the first dict vector is incorrect. I did this simply by adding a 0 for each increasing probability in the dict. I know in the slides, you added the least 2 probabilities to shorten the dict length for the next round of the algorithm until you reach 1. So my ordering of the probabilities by adding zeroes before reaching the number 1 did not take into account any adding of the 2 lowest probabilities (if it was supposed to!) I then tried just making it up, the most probably being 1, next probable 01, next 001, and then did the remaining vectors in 4 bits each, but it complained that the index exceeds matrix dimensions when I did it that way. I'm confused with this if anyone can help!

Maybe this will help you:
https://en.wikipedia.org/wiki/Huffman_coding

posted about 15 hours ago by **machineinventing**

•••

Thanks - I found this link quite helpful in understanding what to try next and I'll try it today:
https://www.siggraph.org/education/materials/HyperGraph/video/mpeg/mpegfaq/huffman_tutorial.html

posted 29 minutes ago by **KarenWest**

•••

I got the answer correct this time - however - I wondered why the solution was exactly as mine was, except that their dictionary had 1's where I had 0's, and 0's where I had 1's - each dict entry was inverted to what mine was. Is there a reason to do it that way?

posted less than a minute ago by **KarenWest**

•••

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☑ Zero run length? 3

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