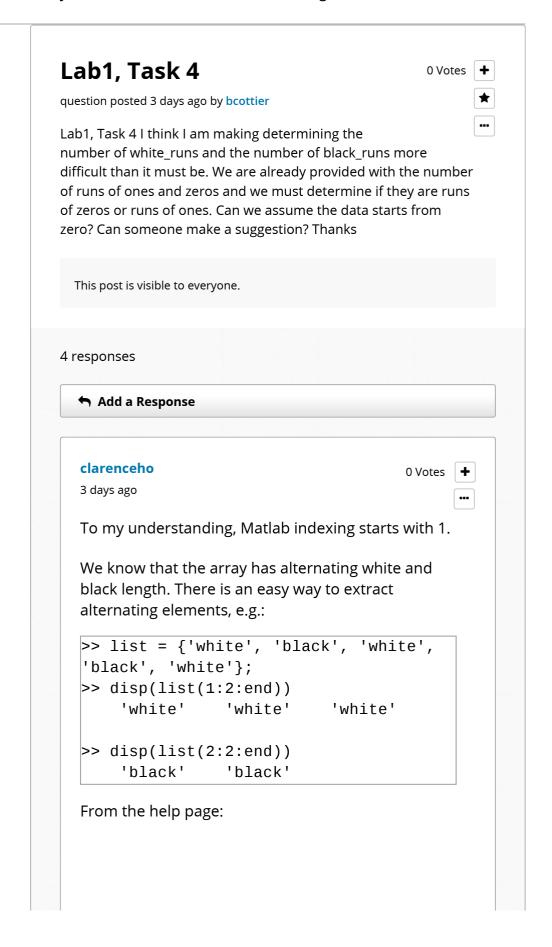


HKUSTx: ELEC1200.2x A System View of Communications: From Signals ...



```
>> help colon
 : Colon.
    J:K is the same as [J, J+1, \ldots,
J+m], where m = fix(K-J). In the
    case where both J and K are
integers, this is simply [J, J+1, ...,
K].
    This syntax returns an empty matrix
if J > K.
    J:I:K is the same as [J, J+I, ...,
J+m*I], where m = fix((K-J)/I).
    This syntax returns an empty matrix
when I == 0, I > 0 and J > K, or
    I < 0 and J < K.
    colon(J,K) is the same as J:K and
colon(J,I,K) is the same as J:I:K.
    The colon notation can be used to
pick out selected rows, columns
    and elements of vectors, matrices,
and arrays. A(:) is all the
    elements of A, regarded as a single
column. On the left side of an
    assignment statement, A(:) fills A,
preserving its shape from before.
    A(:,J) is the J-th column of A.
A(J:K) is [A(J),A(J+1),\ldots,A(K)].
    A(:,J:K) is
[A(:,J),A(:,J+1),...,A(:,K)] and so on.
    The colon notation can be used with
a cell array to produce a comma-
    separated list. C{:} is the same
as C\{1\}, C\{2\}, \ldots, C\{end\}. The comma
    separated list syntax is valid
inside () for function calls, [] for
    concatenation and function return
arguments, and inside {} to produce
    a cell array. Expressions such as
S(:).name produce the comma separated
    list
S(1).name,S(2).name,...,S(end).name for
```

the structure S.

For the use of the colon in the FOR statement, See FOR.

For the use of the colon in a comma separated list, See VARARGIN.

> Reference page for colon Other functions named colon

Hope this helps.

Add a comment

pjjurado

0 Votes +



2 days ago

Hi

To my understanding is not that easy, since there could be 255 0 x statements which correspond to a single white or black.

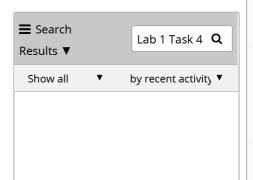
Anyhow, I ask the professor to check the grader. It seems there is something weird on it. I am pretty sure I am separating correcting the white and black numbers considering the case with 255 0 x. I was able to reconstruct runs from my white_runs and black_runs, but the grader complains that my probabilities are not OK.

Could you please provide the first 3 numbers for probabilities of white_runs and black_runs to try to compare and see if I am right? I can also paste my probabilities since this is not the answer to the problem ;-)

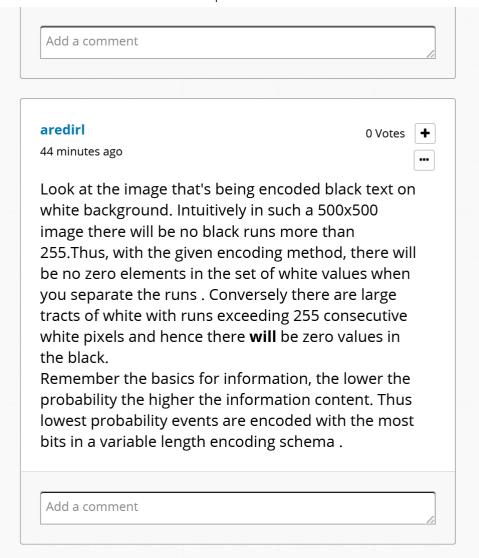
white_prob = 0.0180 0.0425 0.2498 0.1877 0.1946 0.0795 0.0454 0.0451 0.0191 0.0074 0.1108 black_prob = 0 0.7444 0.1303 0.0689 0.0350 0.0113 0.0001 0.0090 0.0004 0.0003 0.0001

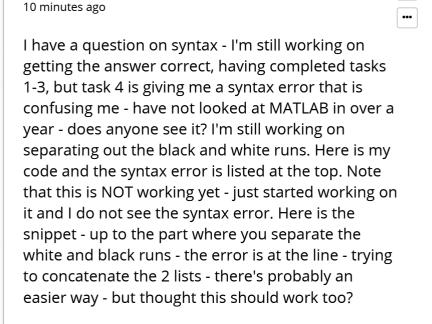
Are my probabilities correct? Any help is welcomed

since I'm stuck on this problem lab 1 task 4. Add a comment aredirl 0 Votes about 22 hours ago Just a guess at the issue . You said you had "reconstructed the runs" by that may I infer that you found the elements corresponding to runs over 255 and summed them? (e.g. 255 0 3 become 258). The fact that there is a zero element (with associated probability) for the set of runs values is the giveaway, i.e. **DON'T** reconstruct the runs - merely separate the black and white values stored in the runs array. Apologies if I misinterpreted your post, for comparison sake I've added a partial list of the calculated probabilities below. Hope this helps white_prob = 0 0.0433 0.2543 black_prob = 0.0184 0.7308 0.1279 I got the same probabilities as you have posted above ••• aredirl. The huffman code for 0 probability symbol should be [], i.e. there is no code for it. However, the grader says that the length of the code for the first element of the white_prob is incorrect. Can someone help? Thanks. posted about 11 hours ago by Googlypk Thanks, it was a stupid bug on the code. ••• Cheers posted about 5 hours ago by pjjurado Hi, Googlypk Since the first value is 0, that means it is the ••• lowest value. Then when start executing the Huffman algorithm, it is member of the first couple of the two probabilities you must choose. Consequently, it will have the longest code in the white dictionnary. Hope this helps you :D posted about 5 hours ago by m_s_william









KarenWest

0 Votes

```
white_runs = [white_runs run_value];
%Error: Line: 38 Column: 25 Unbalanced
or unexpected parenthesis or bracket.
% Load the input image
lorem_img = imread('lorem_img.png');
% display the raw image
figure(1);
imshow(lorem_img);
title('Original image');
% run-length encode
run_length_code =
runlength_encode(lorem_img);
% convert the binary array into an
decimal array of runs
runs = bin2decArray(run_length_code);
% huffman encode
% set the histogram
rlen_list = [0:10,255];
% % % % Revise the following code % %
% %
% separate the black and white runs
len_runs = length(runs);
white_runs = [];
black_runs = [];
%white_runs = runs(1:len_runs);
%black_runs = runs(1:len_runs);
pixel_value = 1;
run_value = 0;
for run = 1:len_runs, %as in task 2,
encode assumes pixel_value = 1 (white
to start)
    if pixel_value == 1,
        if runs[run] ~= 255,
            pixel_value = 0;
        else
            if runs[run] == 255, %we
have more than 255 1's
```

```
pixel_value = 1;
              end
          end
          run_value = runs[run];
          white_runs = [white_runs
  run_value];
      end
      if pixel_value == 0,
          if runs[run] ~= 255,
              pixel_value = 1;
          else
              if runs[run] == 255, %we
  have more than 255 1's
                   pixel_value = 0;
              end
          end
          run_value = runs[run];
          black_runs = [black_runs
  run_value];
      end
  end
  Add a comment
Showing all responses
Post a response:
         \mathbf{B} I
PREVIEW
```



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