```
function [ encodedVector ] = diffEncoder( imgBW )
```

diffEncoder

This function encodes a black and white image into a single vector using differential coding Input: BWImg: black and white image i.e. a Y frame

Output: encodedVector: the BWImg encoded into a single vector through differential-encoding.

```
[height, width] = size(imgBW);       % We need to know how many columns there is.
encodedImg = zeros(height, width);   % Placeholder for the encoded-img.

imgBW = double(imgBW);                  %Original type is uint8. uint8 cant be neg

for colIndex = 1: width                %For every column..

    if colIndex == 1                    %If first column, save as reference-value
        encodedImg(:, 1) = imgBW(:,1);

    else                                %Calculate difference between indexed colu
        encodedImg(:, colIndex) = imgBW(:, colIndex) - imgBW(:, colIndex - 1);

    end
end

encodedVector = reshape(encodedImg, [], 1); %Reshape the matrix C x R into a singl
```

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