LM in Artificial Intelligence
Image Processing and Computer Vision
13/09/2024

1) (A) Briefly describe the idea behind the Hough transform. (B) Provide a description and motivation for each step involved in the computation of the Hough transform, without referring to any specific analytical shape. Successively, provide a graphical representation of the process. (C) Finally, provide a list of its strengths and limitations.

2) (A) Describe the operations performed on a batch of vectors in a batch norm layer, motivating the differences between training time and test time and reporting the shapes of all the tensors involved. (B) Explain briefly and motivate how the batch norm operation changes when applied on batches of images or 2D activations, i.e. after a convolutional layer. (C) Discuss the pros and cons of using batch norm.