

LM in Artificial Intelligence
Image Processing and Computer Vision
25/06/2024

- 1) ~~(A)~~ Briefly describe the stages involved in an Edge detection framework. ~~(B)~~ Provide a detailed description for the Sobel operator and its advantages compared to simple backward and forward differences. ~~(C)~~ Finally, describe the techniques that can be used to compute the magnitude of the gradient, motivating which one provides the best response, and the orientation.
- 2) (A) Describe the organization and design rules of the VGG architectures and the protocol originally used to train the deepest variants. (B) Discuss the trade-offs between a standard 5x5 convolution layer and the factorization used in VGG. (C) Comment on the main differences and similarities between AlexNet and VGG-16.