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Neuron Imaging in Lateral Geniculate Nucleus

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Abstract : The understanding of information that is being processed in the brain, especially in the lateral geniculate nucleus (LGN), has been proven challenging for modern neuroscience and for researchers with a focus on how neurons process signals and images. In this paper, we are proposing a method to image process different colors within different layers of LGN, that is, green information in layers 4 & 6 and red & blue in layers 3 & 5 based on the surface dimension of layers. We take into consideration the images in LGN and visual cortex, and that the edge detected information from the visual cortex needs to be considered in order to return back to the layers of LGN, along with the image in LGN to form the new image, which will provide an improved image that is clearer, sharper, and making it easier to identify objects in the image. Matrix Laboratory (MATLAB) simulation is performed, and results show that the clarity of the output image has significant improvement.

Keywords : lateral geniculate nucleus, matrix laboratory, neuroscience, visual cortex
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