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Dim infrared image enhancement based on convolutional neural network

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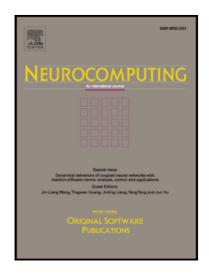
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#### ACCEPTED MANUSCRIPT

#### **Highlights**

- A novel and valid application of improving contrast of dim infrared image by modified convolutional neural network.
- Extraction of image features by convolution with learned filters in the first layer of CNN.
- Simulation method to simulate the properties of dim infrared image, background clutters, low contrast, and blurred edges.



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