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Development of Colorization of Grayscale Images Using CNN-SVM (Conference Paper)

Abualola, A.[a], Gunawan, T.S.[a,b], Kartiwi, M.[c], Ambikairajah, E.[b], Habaebi, M.H.[a]

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[a] Electrical and Computer Engineering Department, International Islamic University Malaysia, Gombak, Malaysia
[b] School of Electrical Engineering and Telecommunications, UNSW, Sydney, Australia
[c] Information Systems Department, International Islamic University Malaysia, Gombak, Malaysia

Abstract

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Nowadays, there is a growing interest in colorizing many grayscales or black and white images dating back to before the colored camera for historical and aesthetic reasons. Image and video colorization can be applied to historical images, natural images, astronomical photography. This paper proposes a fully automated image colorization using a deep learning algorithm. First, the image dataset was selected for training and testing purposes. A convolutional neural network (CNN) was designed with several layers of convolutional and max pooling. Support Vector Machine (SVM) regression was used at the final stage. The proposed algorithm was implemented using Python with Keras and Tensorflow libraries in Google Colab. Results showed that the proposed system could predict the colored image from the training process's learning knowledge. A survey was then conducted to validate our findings. © 2021, The Author(s), under exclusive license to Springer Nature Switzerland AG.

SciVal Topic Prominence

Topic: Palette | Color Image | Retouching

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Color image | Convolutional neural networks | Grayscale image | SVM regression

Indexed keywords

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Gunawan, T.S.; Electrical and Computer Engineering Department, International Islamic University Malaysia, Gombak, Malaysia; email:tsgunawan@iium.edu.my

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