

## **COLORIZATION OF GRAYSCALE IMAGES USING DEEP LEARNING**

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### **ABSTRACT**

*Commercially viable photography began in the late 1820s, but the effective on-set of color photography started as late as 1970s. During this period of over a century, photographs captured were mostly black and white. Colorization plays a vital role in representing the true virtue of real-world manifestations. The human eye perceives color and often remembers information about an object based on its coloration. Colorization problem is difficult to solve without manual adjustment. The proposed systems develop colored versions of gray scale images that closely resemble the real-world versions. The use of Artificial Neural Networks in the form of Convolutional Neural Networks (CNN) and Generative Adversarial Networks (GAN) to learn about features and characteristics through training allows for assigning plausible color schemes without human intervention.*

**KEYWORDS:** *Colorization, Computer Vision, Artificial Intelligence, Deep Learning, Convolutional Neural Network, Generative Adversarial Network*

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### **Article History**

**Received: 04 Mar 2020 | Revised: 26 Mar 2020 | Accepted: 10 Apr 2020**

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