Artificial Creativity

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***Abstract*—This work is a survey on some common machine learning systems aimed at image generation that surfaced in the last years. These systems have recently been used by the general public in viral fashion to generate artistic content, ranging from artistic repropositions of submitted photos to completely new concepts produced by text-based prompts. Although exceptional, these systems also raised some concerns regarding copyright and intellectual property.**

I. Introduction

In January 2021, OpenAI labs presented [1] a text-to-image generative discrete variational autoencoder model to the public with a readily available demo online. In that demo, users could simply type a prompt and, after less than few minutes, a small selection of artistic interpretations of that prompt would be presented. While not being the first text-to-image machine learning model to be presented, it can be argued that DALL-E is the first that had a big impact on the public: in the following months many examples of images generated with that tool would be posted on social media, and many more sophisticated models would surface, taking advantage of the increasing interest in the image generation and *artificial creativity* field.

References

[1] A. Ramesh, M. Pavlov, G. Goh, S. Gray, C. Voss, A. Radford, M. Chen, and I. Sutskever. Zero-shot text-to-image generation, 2021.