

Pembangkitan Pola Tradisional Jepang Menggunakan *Deep Convolutional GAN* *Generation of Traditional Japanese Patterns Using Deep Convolutional GAN*

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Abstract

Japan has a variety of unique cultures, one of the unique cultures in Japan is the pattern of traditional clothes. Clothes from Japan such as kimono and yakata have unique fabric patterns and have their own meaning. The typical Japanese pattern has high popularity in the eyes of the world because it was introduced from films and animations released from this Japanese country. The typical Japanese pattern has a variety of unique patterns. Starting from animals, plants and vectors typical of Japan. Examples of typical Japanese patterns are Uroko (鱗) which has a triangle pattern, Mame Shibori (豆絞) which has a dot pattern, then Tsubaki (椿) which has a camellia flower pattern and so forth. The Generator system for traditional Japanese patterns was built to make traditional Japanese patterns more varied and also have an unusual shape from other traditional Japanese patterns. By using Image Generation which was built with the Generative Adversarial Network method which will be built to make this system. The results of the generation of traditional Japanese patterns have a fairly good output image quality, this is evidenced by the FID value of 0.48953 and the KID value of 3.557623863220215, both evaluation functions produce low values which means that the results of the generation have good quality. In addition, the generation has a combined new pattern output from several patterns from the test data.

Keywords: *Generative Adversarial Network (GAN), Japanese, Image synthesis*
