# *ABSTRACT*

*As a country rich in cultural heritage, Indonesia has batik art that is rich in historical and philosophical values. Innovation in creating new batik patterns is a big challenge, especially in combining traditional and modern elements. Neural Style Transfer (NST), a technique in Deep Learning, can provide a solution by combining content and style from various images. This study uses NST to produce new batik designs by combining style and content from different batik images. The results show that the selection of layers in the CNN model has a significant impact on the results of style transfer, shallow layers are suitable for explicit patterns, while deep layers produce designs that tend to be abstract. The VGG19 model produces sharp style details, ResNet50 is more abstract, and Inception V3 provides a fairly good balance. The selection of the CNN model must consider the balance between content details and the effectiveness of style transfer according to artistic needs.*

***Keywords**: Batik, Neural Style Transfer, Neural Network*