Sistem Deteksi Gambar Wajah Hasil *AI generated* Pada Konten Media Sosial Menggunakan *Deep learning* *(Face Image Detection System AI generated on Social Media Content Using Deep Learning)*
Supervised by Zilvanhisna Emka Fitri, ST.MT.

Fahmy Rosyadi
Study Program of Informatics Engineering
Majoring of InformationTechnology
Program Studi Teknik Informatika
Jurusan Teknologi Informasi

ABSTRACT

Social media has become a major interaction space in the digital age, but the emergence of generative AI technology has raised many concerns about the misuse of this technology by creating fake facial images for social media content. Detection of image authenticity is a major challenge due to the rapid development of generative AI technology that has high visual similarity with the original image. The need for a system to recognize patterns created from this technology by developing a deep learning-based detection system that utilizes CNN and VGG-16 transfer learning, as well as the use of LBP features as preprocessing. The number of datasets in this study amounted to 8300 facial images obtained through augmentation of the initial data of 2358 image data. The training method is carried out with two approaches, namely with LBP feature image data and without LBP. The experimental results show that the model with the image without LBP achieved an accuracy of 99% better than the model using the LBP image which achieved an accuracy of 98% which indicates the ability of the model to recognize patterns in the image without LBP better.

Keywords : *Deep learning, Convolutional Neural Network (CNN), Local Binary Pattern (LBP), AI-generated images, Media social content detection.*