

**PENINGKATAN KLASIFIKASI CITRA PEMICU *TRYPOPHOBIA* DENGAN
AUGMENTASI PADA *DEEP LEARNING* MODEL ARSITEKTUR
CONVOLUTIONAL NEURAL NETWORK (CNN)**

SKRIPSI



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ABSTRAK

PENINGKATAN KLASIFIKASI CITRA PEMICU *TRYPOPHOBIA* DENGAN AUGMENTASI PADA *DEEP LEARNING* MODEL ARSITEKTUR *CONVOLUTIONAL NEURAL NETWORK (CNN)*

Oleh:

Zuyyina Hawani

Ketidaknyamanan visual yang dirasakan oleh beberapa orang ketika melihat objek berupa kumpulan lubang kecil yang tidak beraturan, dapat memengaruhi kondisi psikologis manusia sehingga menimbulkan gejala kecemasan dan ketakutan berlebih. Gejala ini dikenal dengan *trypophobia*, yang hanya fokus pada persepsi visual namun cukup memberikan dampak terhadap kesejahteraan mental. Penggunaan *Convolutional Neural Network (CNN)* untuk melakukan klasifikasi menjadi pendekatan yang berguna dalam memahami dan menginvestigasi fenomena *trypophobia*, terutama dalam konteks analisis gambar dan pola visual. Pada penelitian ini, dilakukan klasifikasi menggunakan model arsitektur EfficientNetB0 dengan augmentasi optimal. Pengenalan pola dataset menciptakan beberapa metode augmentasi. Hasil dari beberapa percobaan metode augmentasi menghasilkan transformasi optimal yaitu transformasi *rotasi* dan *horizontal flip* secara berurutan dengan akurasi sebesar 96,9%. Menurut hasil percobaan, pengenalan pola penting dilakukan untuk memahami karakteristik data, menentukan transformasi dan teknik augmentasi yang tepat untuk menghasilkan hasil yang optimal.

Kata kunci: *deep learning, Convolutional Neural Network (CNN), Efficient Net, image processing, trypophobia trigger.*

ABSTRACT

ENHANCEMENT OF TRYPHOBIA-TRIGGER IMAGE CLASSIFICATION WITH AUGMENTATION IN DEEP LEARNING ARCHITECTURE MODEL CONVOLUTIONAL NEURAL NETWORK (CNN)

By:

Zuyyina Hawani

The visual discomfort experienced by some individuals when observing objects consisting of irregular clusters of small holes can affect human psychological condition, leading to excessive anxiety and fear. These symptoms are known as trypophobia, which focuses solely on visual perception but significantly impacts mental health. The utilization of Convolutional Neural Network (CNN) for classification serves as a valuable approach in comprehending and investigating the trypophobia phenomenon, particularly in the context of image analysis and visual patterns. In this study, classification was conducted using the EfficientNetB0 architecture model with optimal augmentation. Pattern recognition of the dataset entailed several augmentation methods. The results from various augmentation method experiments yielded optimal transformations, namely rotation and horizontal flip transformations consecutively, with an accuracy of 96,9%. According to the experimental findings, pattern recognition is crucial to understand the data characteristics, determine appropriate transformations and augmentation techniques to produce optimal results.

Keyword: *deep learning, Convolutional Neural Network (CNN), Efficient Net, image processing, trypophobia trigger.*

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