

# COMPARISON OF TRANSFER LEARNING VGG16 AND MOBILENETV2 IN ONLINE GAMBLING ADVERTISING DETECTION SYSTEM

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## ABSTRACT

Online gambling advertisements constitute a form of negative content widely disseminated across various digital platforms, particularly social media. These advertisements not only disrupt the user experience but also pose a significant risk of social harm. This research presents a Convolutional Neural Network (CNN)-based system for detecting and blocking online gambling advertisements. Two CNN architectures, VGG16 and MobileNetV2, were employed and compared to identify the model with superior performance in classifying gambling versus non-gambling advertisement images. The dataset comprised diverse gambling and non-gambling advertisement images collected from multiple sources. These images underwent preprocessing steps, including resizing, normalization, and augmentation, to enhance the model's generalizability. The system was implemented as a web-based application that enables users to upload images and receive automatic detection results. Test results indicate that the VGG16 model achieved the highest test accuracy of 90%, while MobileNetV2 attained 88%. Based on these findings, the VGG16 model is deemed more effective for detecting online gambling advertisements. The developed system demonstrates the capability to assist in the automatic filtering of visual content and represents a foundational step toward applying artificial intelligence technologies to enhance digital security on online platforms.

**Keywords:** Advertising, Gambling, Online, VGG16, CNN, Classification, Blocking.