

**Abstract**—Children's development is significantly influenced by their environment, including the media they consume. In Indonesia, many children watch films that exceed their age-appropriate ratings due to the ease of accessing content without age verification on various platforms. To address this issue, this study develops a content restriction system that predicts users' ages based on facial images using a Convolutional Neural Network (CNN) with MobileNetV2 architecture. This architecture is selected for its efficiency in extracting complex features from images while maintaining fast processing speeds. The CNN model is trained using the UTKFace dataset, which includes a diverse range of ages, genders, and ethnicities, ensuring robustness and accuracy. The trained model is integrated into a mobile film application that scans users' faces and predicts their ages when they select a film. If the predicted age is appropriate for the film's rating, access is granted. Otherwise, a warning is issued, and access is denied. This system aims to protect children from inappropriate content, fostering a safer media consumption environment. The study also compares the performance of MobileNetV2 with Xception, highlighting that MobileNetV2 achieved a comparable Mean Absolute Error (MAE) with a minimal difference of 1.3 years while having a significantly smaller model size of 4.6 MB compared to Xception's 41.8 MB. This demonstrates the advantages of MobileNetV2 in terms of both performance and application size.

**Keywords**—*age prediction, Convolutional Neural Network, MobileNetV2, film application*