

I. INTRODUCTION

Children learn by observing and paying attention to their surroundings. Between the ages of 0-6 years, they mimic what they see around them, including the films they watch [1]. During this developmental stage, the role of the environment is crucial in shaping their perceptions of good and bad [2]. Therefore, age restrictions for watching films are essential to protect children's development from the negative impacts of inappropriate films. This effort aims to prevent children from being exposed to films that could harm their mental, physical, and emotional development. Selecting films that are appropriate for a child's age and interests is crucial as it influences their viewing experience and the learning of life values vital for their growth. Additionally, exposure to age-inappropriate films can lead to issues such as risky behaviors and exposure to violence, which can seriously affect children's development [3].

According to a 2021 survey by the Indonesian Film Censorship Board (Lembaga Sensor Film, LSF), 54% of children in Indonesia watch films that are not suitable for their age [4]. This is alarming as it can negatively impact children's development, as previously mentioned. The LSF survey identified several factors contributing to this, including the ease of access to media content through cinemas, television, and streaming platforms, lack of parental supervision, and insufficient parental understanding of the importance of age restrictions for film viewing.

Given the ease of accessing media across various platforms, we are interested in developing a viewing application that can automatically censor or restrict content if the viewer does not meet the film's rating criteria. To build this application, a model with artificial intelligence capable of accurately predicting age through real-time facial recognition is required, one of which can be constructed using a Convolutional Neural Network (CNN). CNN is a type of neural network architecture designed explicitly for processing visual data, such as images. The strength of CNN lies in its ability to automatically extract essential features from images through a series of convolutional and pooling layers [5]. Thus, CNN can effectively identify complex patterns in facial structures, enabling accurate age prediction based on the visual characteristics present in the images [6]. This model will be integrated into the application and can operate without internet access to support the "Watch Offline" feature on popular platforms like Netflix and Disney+.

In addition, the proposed system has the potential to significantly change media consumption habits and parental control over the content that children watch. By integrating this application into existing media platforms, parents will have a more effective tool to ensure that their children only access age-appropriate content. This not only helps protect children from exposure to negative content but also supports parents in carrying out their role as supervisors of the content consumed by their children. Thus, it is hoped that this application can increase parental awareness and responsibility and reduce the risk of negative impacts from uncontrolled media consumption on child development.