

## ***ABSTRACT***

Video game testing is the stage of making a video game when the game is tried out by several testers, both professional and laymen. This test aims to gain user experience when trying the video game. Emotion from testers while playing is a parameter of the user experience. Emotions such as anger, happiness, sadness, or surprise can be seen from changes in facial expressions. This emotional parameter can be used as feedback for satisfaction or deficiency in the video game so that developers can increase the improvement of the final product of the game.

This final project discusses the human facial expression classification system to test video games using the K-Nearest Neighbor (KNN) classification method and using the Indonesia Mixed Emotion Dataset (IMED) as training data and trial data. This system, there are several processes, namely preprocessing, feature extraction, and classification. Finally, this system issues a classification of facial expressions detected as data that can be used in video game development.

The final result of this final research assignment is that the K-Nearest Neighbor (KNN) algorithm results in a training model of 98.24% and real-time human facial expressions with an accuracy rate of 56%.

**Keywords:** Video Game Tester, Emotions, Facial Expressions, K-Nearest Neighbor (KNN), Indonesian Mixed Emotion Dataset (IMED).