

ABSTRAK

Image recognition has become an important application in the digital era 5.0, especially in security, health and industry. In developing this technology, the Support Vector Machine (SVM) and Backpropagation Neural Network (BNN) methods have provided good results. BNN has the advantage of accuracy with relatively little data, while SVM provides high accuracy in classifying images with many attributes and few samples.

However, the problem of inaccuracy in distinguishing objects remains a challenge. SVM can be used to differentiate objects, while BNN can predict system output. SVM separates classes in the training data by maximizing the distance, while BNN looks for the minimum error value in the weights with Gradient Descent.

The popularity of SVM and BNN has increased over time, experiencing improvements in training techniques and model optimization. Previous research shows the potential of developing analytical models to improve image prediction accuracy. The benefits of this research include information regarding the performance of SVM and BNN in image recognition as well as a comparison of the two. Research limitations involve the use of student facial datasets, the use of Python as a tool, and performance evaluation based on accuracy, precision, recall, and F1 Score.

Keywords. SVM, BNN, Accuracy