ABSTRACT

This research aims to apply deep learning, specifically leveraging the VGG16 architecture and transfer learning techniques, to detect Pink Eye disease in goats. The research method involves using various tools and materials, with data comprising images of goat eyes infected with Pink Eye and images of healthy goat eyes. The implementation process includes data collection using web scraping techniques, and data preparation involves steps such as data division, image resizing, and data augmentation using the Keras API. Four models were developed with different architectures and features, prepared utilizing the RMSprop optimizer, a learning rate of 0.001, parallel cross-entropy misfortune work, and CNN architecture. The models were evaluated using the Confusion Matrix from the TensorFlow Library, with an emphasis on achieving a minimum target accuracy of 90%, thereby demonstrating the models' effectiveness in detecting Pink Eye disease in goats.

***Keywords:** Deep Learning, Tensorflow, Transfer Learning, Machine Learning, VGG-16*