

ABSTRAK

Permintaan terhadap daging kambing di Indonesia terus meningkat, namun tidak sebanding dengan jumlah produksi, sehingga mendorong kenaikan harga dan potensi kecurangan dalam penjualan. Terkadang masyarakat masih kesulitan dalam mendeteksi daging kambing segar, tidak segar, dan busuk sehingga berpotensi dirugikan dalam saat ini. Penelitian ini membuat sistem klasifikasi kesegaran daging kambing menggunakan metode deep learning berbasis *Convolutional Neural Network* (CNN) dengan arsitektur *ResNet50V2* untuk membantu masyarakat dalam memilih daging kambing. Model dilatih menggunakan *hyperparameter learning rate*, *epoch*, dan *optimizer Adam*. Hasil pengujian menunjukkan bahwa model terbaik dengan akurasi 88.15% yaitu *ResNet50V2* dengan *optimizer Adam* dan *epoch 25* yang menghasilkan performa terbaik pada kelas Daging Busuk *precision 93%*, *recall 88%*, *f1-score 90%*; kelas Daging Segar *precision 91%*, *recall 89%*, *f1-score 90%*; dan kelas Daging Tidak Segar *precision 81%*, *recall 88%*, *f1-score 84%*. Model ini diimplementasikan ke dalam aplikasi *Android* untuk membantu pengguna mendeteksi kesegaran daging kambing secara praktis dan akurat.

Kata Kunci : Daging Kambing, *Deep Learning*, *ResNet50V2*, *Mobile App*

ABSTRACT

Demand for goat meat in Indonesia continues to increase, but is not proportional to the amount of production, thus driving up prices and potential fraud in sales. Sometimes people still have difficulty in detecting fresh, not fresh, and rotten goat meat so that they are potentially disadvantaged at this time. This study created a goat meat freshness classification system using deep learning method based on Convolutional Neural Network (CNN) with ResNet50V2 architecture to help people in choosing goat meat. The model is trained using hyperparameter learning rate, epoch, and Adam optimizer. The test results show that the best model with 88.15% accuracy is ResNet50V2 with Adam optimizer and epoch 25 which produces the best performance: in the Rotten Meat class precision 93%, recall 88%, f1-score 90%; Fresh Meat class precision 91%, recall 89%, f1-score 90%; and Unfresh Meat class precision 81%, recall 88%, f1-score 84%. This model is implemented into an Android application to help users detect the freshness of goat meat practically and accurately.

Keywords: Goat Meat, Deep Learning, ResNet50V2, Mobile App