

## ABSTRACT

### *Culinary Image Classification of Indonesian Cakes Using Deep Learning*

This study aims to develop an image classification model for Indonesian culinary specialties, focusing on recognizing types of Indonesian culinary cakes, using the deep learning method. The model used in this study is EfficientNet, a Convolutional Neural Network (CNN) architecture that is known to be efficient in producing high accuracy with optimal use of computing resources. The development process begins with collecting and labeling a diverse dataset of Indonesian culinary cake images, followed by a preprocessing stage to improve data quality before training the model. Furthermore, the model is trained using the dataset to recognize various types of cakes based on visual patterns found in the image. The selection of EfficientNet is based on its ability to optimally scale model parameters, so that it can maximize performance without significantly increasing complexity. The results of this study indicate that the EfficientNet model is able to classify types of Indonesian culinary cakes with a high level of accuracy, as evidenced by the evaluation of metrics such as accuracy, precision, recall, and F1-score. This success shows great potential in the application of deep learning-based technology to support the preservation of Indonesian culinary cake culture. The application of this model can be used in educational platforms and culinary promotions, making it easier for the public to recognize, understand, and preserve Indonesian culinary heritage. Thus, this research provides an important contribution in supporting cultural preservation through image-based technological innovation.

**Keywords:** Image Classification, Artificial Intelligence, Deep Learning, EfficientNet, Convolutional Neural Networks (CNN)