

ABSTRACT

IMPLEMENTATION OF FOREST AND LAND FIRE DETECTION WEBSITES USING DENSENET201

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Forest and land fires in Indonesia are caused by human and natural factors which cause losses in the health, ecological, and social sectors. Handling forest and land fires are still experiencing problems due to difficulties in determining the location of the fire. To overcome this problem, an intelligent system has been developed to detect forest and land fires which are accessed via the website, so that they are easily accessed and used by the community. The purpose of this research is to create a model that can detect forest and land fires using DenseNet201 and deploy using the flask framework to a website. This study uses a deep learning approach by applying the DenseNet201 transfer learning concept in training using data consisting of two classes, namely fire, and non-fire. The trained model was tested using 380 test image data using a confusion matrix to see the accuracy of the model before being deployed using the flask framework to become a website that can detect forest and land fires using images. The results obtained by using DenseNet201 in the training process with data consisting of two classes get a model with an accuracy value of 99% and the website has been successfully deployed so that it can detect forest and land fires. It can be concluded that the use of the DenseNet201 model is effective and websites that have been deployed using the DenseNet201 model can classify forest images that are on fire or not on fire to help people detect forest fires.

Keywords: *Forest and Land Fire, Deep Learning, DenseNet201, Flask, Website*