ABSTRACT

Following the growth of technology that grows from time to time, then Humans are competing to create new technology. Technology that created is useful in solving problems that exist in the Public. One example of technological developments that are being intensively in society, namely Artificial Intelligence (AI) technology. AI is a machine technology that can simulate human intelligence big data. One part of AI is Deep Learning. Deep learning is a machine technology that has good capabilities, one of which is for image classification. One of the most popular parts of Deep Learning for image classification, namely Convolutional Neural Network (CNN).

In this final project, the author performs the classification of leukemia, with image sample in the form of blood cells. In the classification of leukemia, research This method uses two types of blood cell images, namely Acute Lymphoblastic Leukemia (ALL) which are leukemia blood cells and normal blood cells. in There are four stages of image classification on CNN, namely the data acquisition stage, pre-processing stage, CNN model learning stage, and CNN classification stage.

There are five parameters carried out in this classification, namely: convolutional layer, input size, optimizer, batch size, and learning rate for get the best model. Then the results of the experiment of the five parameters will be analyzed using accuracy and loss. Final Result of Final Project This shows the best model for classification of leukemia types using CNN architecture proposal, with 3 convolution layers, 450x450 input size, optimizer Adam, batch size 32, and learning rate of 0.00001 have accuracy 94% and loss 22.03%.

Key Word : Blood Cells, Classification of Leukemia, Convolutional Neural Network.