**Apple image classification using Convolutional Neural Network**

***Abstract***

*The selection of apple based on the quality is very important to increase sales and market comptetition. The selection process is still using manual methods, while the method does not give accurate and difference results. The difference is due to different perceptions of each person. The development of technology and science making it possible by means of the classification or in terms of the selection of object using the specified characteristics based on the technology-based image. The image used can be a source of information that can be used to make the object classification. This research study about using Convolutional Neural Networks (CNN) to classify apple automatically. The process of classification using a Keras package on Rstudio software. The sample of data used is 100 images. The classification needs to train the data to form a model. The model will be used for training and testing data, and divide into two data categories. The model using different activation functions, then comparing the results. The accuracy of data test is 95% and 90%, which is shows has been able to identify the feasibility of apples.*

*Keywords-- Deep Learning , CNN, Image Processing, Classification of fruits, Keras*