

ABSTRACT

Coffee is a plant that bears small, rounded and large maximum marbles. This coffee fruit is often made for the purpose of being drunk, made of food. So far, coffee fruit farmers choose the maturity of coffee by hand or by choosing from the farmers, so in that way they are vulnerable to choosing coffee beans with various factors such as factors that support and support.

In this research a program will be made that can determine the maturity of coffee fruit. By comparing the K-Nearest Neighbor method with the Fuzzy Logic method for classification of features and Gray Level Co-occurrence Matrix Extraction (GLCM) for feature extraction.

In this research, one type of coffee is used, Arabica Coffee with a level of maturity classification. In this study, 100% accuracy was obtained with a computing time of 108.03 s with the KNN classification method and GLCM extraction, using a 5 GLCM radius, image resize size 128x128 pixels, GLCM angle - radius radius, Cosine distance type, and K = value 1.

Keywords: Fuzzy Logic, K-NN, Gray Level Co-occurrence of Matrix Extraction, coffee fruit, classification, feature extraction