Ensiklopedia Digital Jenis Apel (*Malus sylvestris Mill.*) Menggunakan *Support Vector Machine* (SVM) *Digital Encyclopedia of Apple (Malus sylvestris Mill.) Species Using Support Vector Machine (SVM).*
Zilvanhisna Emka Fitri, ST.MT

Anju Alicia Johan
Study Program of Informatic Engineering
Majoring in Information Technology
Program Studi Teknik Informatika
Jurusan Teknologi Informasi

ABSTRACT

Apples are a pomaceous fruit plant from the Rosacease family and the Malus domestica species. Apples have various colors on their own skin, namely green apples have several types including green manalagi apples, manalagi cherry apples, and roma beauty apples. There are several types of red apples, including Fuji apples, red apples, and Ana apples. Each type of apple has different characteristics so that different opinions will be obtained by each individual which causes a different level of accuracy. Current classification technology can be used to assist the sorting process. This study uses the Support Vector Machine (SVM) method which aims to recognize apple patterns using texture analysis on grayscale images using the Gray-Level Co-occurrence matrix (GLCM) extraction method and color feature extraction in color images using Red Green Blue (RGB) and Hue Saturation Value (HSV). The feature extraction results will be input for SVM to classify apple types. The data used in this study were 600 images, consisting of 480 training data images and 120 test data. The results of the accuracy of this method reached an accuracy rate of 93.75% for training data and an accuracy of 87.50% for test data.

Key words : Apples, RGB, HSV, GLCM, SVM