

ABSTRACT

Braille letters definitely help the blind in reading and doing daily activities. The problem is that some of the Latin text has not been available in Braille yet. So to be able to read by the blind the Latin text has to be converting in Braille first. In order to that, a tool that can help people to minimize the time for translating a Latin text into Braille text is very much needed.

A tool like that can be created on an application that can process a document with Latin character and translate it into a Braille document. With that way, the conversion process from Latin to Braille could be very quick and easy. Technique that can be applied to make this tool happen is with applying digital image processing. In this final project, Histogram Area is used for a feature extraction algorithm and *Support Vector Machine (SVM)* for classification method.

In practice, the digital image of Latin text was taken by using a scanner, then enter the preprocessing stage. Image output from processing stage will be extracted using Histogram Area and then stored in a database. Classification database will be done with the SVM method. The trial is using image with Arial typing and Font size 24 and 26. The desired result (output) is how a system can identify and compare patterns of Latin character and can informed decisions on each type of pattern of certain Latin character from input and converting that into Braille character. The level of accuracy obtained in this final task are 85.81% for One Against All Method, and 86.05% for One Against One Metode.

Keyword: *Support Vector Machine (SVM), Histogram Area, Braille.*