

Abstract

Japanese letter is a very unique and complex character compared to usual Roman's letter. Not all people can read the Japanese letter. Takes a quite long times to learn about Japanese letter. Through this final project, the writer hope it will much easier for people to read Japanese letter, especially Kana (Hiragana and Katakana) letter. If one person can read the Japanese character well, they can easily learn to use Japanese in their daily condition.

In this final project, the writer developed a Japanese character pattern recognition system, especially Kana character. In this system there will be 3 steps of procedure, they are: preprocessing, Direction Feature Extraction, and post processing using Artificial Neural Network Learning Vector Quantization. Most of Kana components are consist of directional line segments. From that reason in this final project we try to use Direction Feature Extraction to specify the features of each character image.

The data testing that we use in this system is an image file consist of several write-hand character that never trained before. From the test, we know that Direction Feature Extraction and Artificial Neural Network Learning Vector Quantization can take the good average value of accuracy.

Key word: Kana (Hiragana and Katakana), Direction Feature Extraction, Learning Vector Quantization (LVQ), Artificial Intellegent, handwritten pattern recognition.