SCOPE FOR FUTURE WORK

The handwriting recognition techniques developed in this research can be further extended in the following ways:

(i) The proposed dilation of signature images can be made efficient by exploiting data parallelism in the process of dilation. Normalization of signature samples at different resolution and clustering of signature sample by other algorithms can be investigated.

(ii) Numeral recognition technique can be extended for other handwritten 2-D symbols. An interactive graphical editor can be developed. The editor can allow user to draw different styles of symbols from basic primitives. The structure of a symbol and its attributes such as size and position, can be recorded. Test rules generation can be automated from the symbols’ structures. The system should be able to adaptively modify the test rules, if needed, when new symbols adds into the list of symbols to be recognized.

(iii) Analytical techniques should be developed to extract characters from cursive words. The paradox that 'Segmentation needs recognition, and recognition needs segmentation', can be resolved using holistic approaches, one of which is proposed in this thesis. Combination of analytical and holistic approaches can give better results.

(iv) More research work needs to be undertaken to develop a new variation measure or with modification in the proposed variation measure, so that the variation in different database used by researchers can be quantified and the performance of statistical, syntactic and structural handwriting recognition algorithms can be compared.