**Abstract**

Distinctive Handwriting is a thought provoking task in writer identification. The style and shape of the letters written by the same writer may vary and entirely different for different writers. Alphabets in the handwritten text may have loops, crossings, junctions, different directions and so on. Therefore exact prediction of individual based on his/her handwriting is highly complex and challenging task. This paper proposes a new model for learning the writer's identity constructed on Tamil handwriting. Handwritten documents written by the writers are scanned and segmented into words. Words are further segmented into characters for character level writer identification. The character writings in Tamil are analyzed and their describing features are defined. The Writer identification problem is formulated as classification task and a pattern classification technique namely Support Vector Machine has been employed to construct the model. It has been reported about 90. 6% of prediction accuracy by RBF kernel based classification model in character level writer identification.