Printed Thai Character Recognition Using Particle Swarm Optimization Algorithm

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Abstract : This Paper presents the applications of Particle Swarm Optimization (PSO) Method for Thai optical character recognition (OCR). OCR consists of the pre-processing, character recognition and post-processing. Before enter into recognition process. The Character must be "Prepped" by pre-processing process. The PSO is an optimization method that belongs to the swarm intelligence family based on the imitation of social behavior patterns of animals. Route of each particle is determined by an individual data among neighborhood particles. The interaction of the particles with neighbors is the advantage of Particle Swarm to determine the best solution. So PSO is interested by a lot of researchers in many difficult problems including character recognition. As the previous this research used a Projection Histogram to extract printed digits features and defined the simple Fitness Function for PSO. The results reveal that PSO gives 67.73% for testing dataset. So in the future there can be explored enhancement the better performance of PSO with improve the Fitness Function.