

INDUCTIVE LOGIC PROGRAMMING / MACHINE LEARNING / PROGOL / RECOGNITION / THAI
CHARACTERS

APINYA SUPANWASSA : AN APPLICATION OF INDUCTIVE LOGIC PROGRAMMING TO THAI
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The purpose of this thesis is to apply Inductive Logic Programming (ILP) to Thai printed character recognition. The ILP system which have been chosen is PROGOL. First, PROGOL is employed to learn Thai printed characters. The examples of characters and background knowledge are mainly used to train PROGOL. The output of PROGOL is a set of rules each of which defines the characteristics of a Thai character. Then, the learned rules are used to recognize an input character by comparing them with the input character, and the most matched rule together with associated character is selected as the output. Two experiments were run to test the method. In the first experiment designed for unseen fonts, the Eucrosia fonts are used for training and the Cordia fonts are used for testing. The recognition rate is 87.38%, tested with 539 characters. In the second experiment for noisy fonts, the Cordia and Eucrosia fonts are used for training, and the copies produced by a copy machine of both types of fonts composed of 2156 characters are used for testing. The recognition rate is 87.89%. The average recognition time is 0.13 second per character.

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