

عنوان مقاله:

Optimization of Farsi Letter Arrangement on Keyboard by Simulated Annealing and Genetic Algorithms

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خلاصه مقاله:

Nowadays one of the most common devices for computer data entry is the keyboard. No doubt, saving time, in the present age, is one of the most important goals humankind sought to promote. Optimization of keyboard arrangement is of great importance, since it can help us to have access to information in less time. A combined evolutionary algorithm can search on the keyboard and reach the optimized arrangement with regard to an evaluation factor (the level of typing comfort for a special letter arrangement) in the space of Persian letters arrangement on a keyboard. In this paper, the genetic and simulated annealing algorithms are searching for the best permutation among the 33 Persian letters on the keyboard. The evaluation criteria includes three factors: intermittent use of hands in typing the texts, not using a hand for typing two adjacent letters and the level of hardness of typing a letter in the related arrangement. In the studies conducted by the large and various data sets (Persian texts), it was determined that the optimized arrangement resulted from this hybrid algorithm performs better than the present algorithm

کلمات کلیدی:

permutation, genetic algorithm, simulated annealing algorithm, keyboard, optimum arrangement

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