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Matching System for Animal-Assisted Therapy Based on the Levenshtein and Gale-Shapley Algorithms (Conference Paper)

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Abstract

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This current research is based on the implementation of an algorithm that assigns pets, cats, or dogs to persons with depressive disorders such as low self-esteem. We found that even though different institutions have made the assignments of pets to patients, we were not able to find one that uses an IT tool for this task. Because of this situation, we decided to adapt to the well-known Gale-Shapley algorithm that has been used successfully in different situations in which it needs a perfect match between two parties. The results obtained have been validated by experts in the field of animal and person psychology. Because the Gale-Shapley algorithm needs a preference array between the parts involved and due that an animal cannot establish this set of preferences, we aimed to use a string similarity-based algorithm for obtaining preferences arrays based on the behavioral traits of an animal or person. © 2021, Springer Nature Switzerland AG.

Author keywords

Animals assisted therapy | Stable matching | String similarity

Indexed keywords

Engineering controlled terms: Computer programming | Computer science

Engineering uncontrolled terms: Behavioral traits | Gale-shapley algorithms | Implementation of an algorithm | Matching system | Perfect matches | Self esteem | String similarity

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