An Improved Happiness-Based Scheduling for Nurse Shifts Planning

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ABSTRACT

The nurse shifts scheduling is a multifaceted problem with the extensive number of constraints requirement. There were many researchers addressed and found a high quality scheduling nurse shifts in different aspects and targets, including the lowest cost and the most efficiency. But none of them considered the nurse happiness at all. When the nurses work under unhappy feelings/environment, they are not only distracted from job duties, sometimes they will just quit their jobs and leave. This paper considers the scheduling constraints from both the governmental and hospital policies, and the nurses' feeling in terms of the degree of happiness. A core methodology is developed in this research which consists of the particle swarm optimization (PSO) algorithm to accelerate the generating of the nurses shift schedules and also maximizing the nurse happiness at the same time.

Keywords: Nurses, Shift Scheduling, Happiness, Particle Swarm Optimization

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