

Recent Advances in
**INTELLIGENT
DECISION
SUPPORT SYSTEM
FOR HEALTHCARE**

The book chapter presents research of recent methods on Intelligent Decision Support System (DSS) that assist the decision making of complex real-life problems in healthcare domain. Problems addressed by each intelligent DSS, as discussed in the book chapter are medical doctor rostering, nurse scheduling and motion of medical robotic equipment. A study that adapts Genetic Algorithm to guide the development of an automated medical doctor rostering is laid out in the first chapter. In the second chapter, modeling of Genetic Algorithm in solving nurse scheduling problem is presented. Development of a path planning algorithm for two manipulators of medical robotic equipment, based on a newly developed Backtrack Free Path Planning Algorithm (BFA) is discussed in the third chapter. The book chapter ends with Chapter Four on study that employs Collision Avoidance Path Planning Algorithm (CAA) for multi-manipulators of medical robotic equipment. The main aim of this book chapter is to share and disseminate information pertaining to recent advances in intelligent DSS in assisting health professionals in making informed decisions, timely and accurately. The chapters presented in this book serve as an excellent reference for academic and health professional, who are interested in broadening their knowledge regarding Intelligent Decision Support System for healthcare.



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Editors
Azurah A. Samah • Hairudin Abdul Majid

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