

Perancangan pemilihan alternatif teknologi internet of things pada rehabilitasi medik = Design of internet of things technology alternative selection in medical rehabilitation

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Abstrak

Layanan rehabilitasi medik menghadapi permasalahan dalam hal keberlangsungan durasi dan intensitas terapi yang terbatas. Implementasi Internet of Things (IoT) pada unit rehabilitasi medik dapat membantu dokter dan perawat untuk memberikan perawatan yang akurat serta pemulihan yang lebih cepat. Penelitian ini bertujuan untuk memilih alternatif terbaik IoT yang dapat diimplementasikan pada unit rehabilitasi medik di rumah sakit dengan memperhatikan kriteria penerapan Internet of Things dan kemampuan keuangan rumah sakit. Opini dari delapan orang ahli digunakan untuk mengidentifikasi dan memilih kriteria dan subkriteria yang mendukung proses penerapan IoT pada rehabilitasi medik di rumah sakit. Metode Best Worst Method (BWM) digunakan mendapatkan bobot prioritas dari kriteria dan subkriteria penerapan IoT. Metode Additive Ratio Assessment (ARAS) digunakan untuk mendapatkan tingkat utilitas setiap alternative IoT. Metode Zero One Goal Programming digunakan untuk memilih penerapan Internet of Things berdasarkan limitasi seperti tingkat utilitas ARAS dari setiap alternatif, biaya pengadaan dan instalasi, biaya pelatihan, dan biaya pemeliharaan. Hasil akhir didapatkan bahwa virtual reality adalah penerapan Internet of Things yang terpilih berdasarkan kriteria penerapan Internet of Things dan kemampuan keuangan rumah sakit.

.....Medical rehabilitation services face problems in terms of limited duration and intensity of therapy. The implementation of the Internet of Things (IoT) in medical rehabilitation is expected to help doctors and nurses to provide accurate care and faster recovery. This study aims to choose the best alternative IoT that can be implemented in medical rehabilitation units in hospitals by taking into account the factors of Internet of Things implementation and hospital financial capability. The opinions of eight experts were used to identify and select factors and sub-factors that support the process of applying IoT in medical rehabilitation in hospitals. The Best Worst Method (BWM) method is used to get priority weighting from the criteria and sub-criteria for applying IoT. The Additive Ratio Assessment (ARAS) method is used to obtain the utility level of each alternative IoT. The Zero One Goal Programming method is used to choose the implementation of Internet of Things based on limitations such as the ARAS utility level of each alternative, procurement and installation costs, training costs, and maintenance costs. The final result is that virtual reality is chosen based on the factors of Internet of Things implementation and the financial capability of the hospital.