

SISTEM REKOMENDASI PEMILIHAN METODE PENGEMBANGAN PERANGKAT LUNAK MENGUNAKAN METODE SIMPLE ADDITIVE WEIGHTING

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ABSTRAK

Pemilihan metode pengembangan perangkat lunak (SDLC) yang tepat merupakan faktor penting dalam keberhasilan proyek teknologi informasi. Setiap metode memiliki karakteristik, kelebihan, dan kekurangan tersendiri, sehingga pemilihannya perlu disesuaikan dengan kondisi spesifik proyek. Namun, proses ini sering dilakukan subjektif tanpa analisis mendalam terhadap berbagai faktor yang mempengaruhi. Sehingga berpotensi menimbulkan keterlambatan atau kegagalan proyek. Penelitian ini bertujuan mengembangkan sistem pendukung keputusan berbasis web yang mampu memberikan rekomendasi metode SDLC secara objektif menggunakan algoritma *Simple Additive Weighting*. Sistem memproses sembilan kriteria penilaian, yaitu ukuran tim, kompleksitas sistem, Perubahan kebutuhan, keterlibatan pengguna, estimasi durasi proyek, kebutuhan dokumentasi, tingkat pengalaman tim, tingkat risiko, dan anggaran. Berdasarkan hasil implementasi dan pengujian, sistem menghasilkan rekomendasi yang akurat dan konsisten, ditunjukkan oleh kesesuaian penuh antara hasil perhitungan sistem dan perhitungan manual. Dengan demikian, sistem ini dapat memberikan rekomendasi metode SDLC secara sistematis, akurat, dan efisien sesuai karakteristik proyek yang diinputkan.

Kata kunci: Sistem Rekomendasi, *Software Development Life Cycle* (SDLC), *Simple Additive Weighting* (SAW), *similarity*, *Laravel*.

RECOMMENDATION SISTEM FOR SELECTING SOFTWARE DEVELOPMENT METHODS USING THE SIMPLE ADDITIVE WEIGHTING METHOD

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ABSTRACT

Selecting the right software development lifecycle (SDLC) method is an important factor in the success of an information technology project. Each method has its own characteristics, advantages, and disadvantages, so the selection needs to be tailored to the specific conditions of the project. However, this process is often carried out subjectively without in-depth analysis of the various factors that influence it. This has the potential to cause project delays or failures. This study aims to develop a web-based decision support system that is capable of providing objective SDLC method recommendations using the Simple Additive Weighting algorithm. The system processes nine assessment criteria, namely team size, system complexity, requirement changes, user involvement, project duration estimation, documentation requirements, team experience level, risk level, and budget. Based on the implementation and testing results, the system produces accurate and consistent recommendations, as demonstrated by the full compatibility between the system's calculations and manual calculations. Thus, this system can provide systematic, accurate, and efficient SDLC method recommendations according to the characteristics of the input project.

Keywords: Recommendation Sistem, Software Development Life Cycle (SDLC), Simple Additive Weighting (SAW), similarity, Laravel.