

ABSTRAK

Putri. 2025. *Sistem Pakar Deteksi Dini Kanker Serviks Berbasis Website Menggunakan Metode Certainty Factor* Program Studi Teknik Informatika, Fakultas Teknik, Universitas PGRI Madiun. Pembimbing (I) Sekreningsih Nita, S.Kom., M.T. (II) Pratiwi Susanti, S.Kom., M.MT.

Penelitian ini berfokus pada perancangan dan pembangunan Sistem Pakar Deteksi Dini Kanker Serviks berbasis Web dengan menggunakan metode *Certainty Factor* (CF) yang digunakan untuk menentukan seberapa besar tingkat keyakinan terhadap suatu diagnosis berdasarkan gejala yang dipilih pengguna. Sistem dikembangkan melalui metode *Waterfall*, meliputi tahap analisis kebutuhan, perancangan, implementasi dengan *framework CodeIgniter 4*, dan pengujian menggunakan metode *blackbox* dengan pendekatan *webqual*. Fitur utama sistem mencakup konsultasi gejala, hasil diagnosis dengan tingkat kepastian, pengelolaan basis pengetahuan, serta riwayat diagnosa. Hasil pengujian menunjukkan bahwa seluruh fitur berjalan dengan baik dan hasil pengujian mendapatkan persentase rata-rata 79,81% yang artinya secara keseluruhan sistem sudah cukup baik untuk digunakan. Sistem ini dinilai layak digunakan sebagai alat bantu deteksi dini kanker serviks karena mampu memberikan informasi yang akurat, mudah diakses, dan meningkatkan kesadaran masyarakat terhadap pentingnya deteksi dini.

Kata kunci: Sistem Pakar, Kanker Serviks, Deteksi Dini, *Certainty Factor*, *CodeIgniter*, Website

ABSTRACT

Putri. 2025. *Web-Based Expert System for Early Detection of Cervical Cancer Using the Certainty Factor Method*. Informatics Engineering Study Program, Faculty of Engineering, Universitas PGRI Madiun. Supervisor: (I) Sekreningsih Nita, S.Kom., M.T. Co-Supervisor (II) Pratiwi Susanti, S.Kom., M.MT.

This study focuses on the design and development of a Web-Based Expert System for the Early Detection of Cervical Cancer, utilizing the Certainty Factor (CF) method to determine the level of confidence in a diagnosis based on the symptoms selected by the user. The system is developed using the Waterfall methodology, which includes stages such as requirements analysis, system design, implementation using the CodeIgniter 4 framework, and testing through the black-box method with a WebQual approach. The main features of the system include symptom consultation, diagnostic results with certainty levels, knowledge base management, and a diagnosis history log. Testing results show that all system features function properly, with an average user satisfaction score of 79.81%, indicating that the system is generally suitable for use. Overall, the system is considered feasible as a decision support tool for the early detection of cervical cancer, as it provides accurate information, is easily accessible, and contributes to raising public awareness about the importance of early screening.

Keywords: Expert System, Cervical Cancer, Early Detection, Certainty Factor, CodeIgniter, website