

ABSTRAK

Kucing merupakan salah satu hewan peliharaan yang paling banyak dipelihara di Indonesia. Seiring dengan meningkatnya populasi kucing peliharaan, permasalahan kesehatan seperti penyakit kulit menjadi salah satu penyakit yang paling sering ditemukan pada Komunitas Pecinta Meong. Kemiripan karakteristik gejala antar penyakit kulit memicu tingginya risiko kesalahan penanganan dini oleh pemilik kucing akibat keterbatasan pengetahuan medis, biaya, serta akses operasional klinik hewan. Penelitian ini bertujuan untuk merancang dan membangun sistem pakar berbasis website bernama *Healthy Cat* sebagai platform untuk mendeteksi delapan jenis penyakit kulit kucing secara mandiri. Sistem dibangun menggunakan metode *Rapid Application Development* (RAD), dan dikembangkan menggunakan bahasa pemrograman python dengan *framework* Flask, HTML, CSS, JavaScript, serta basis data relasional MySQL. Untuk mengatasi ketidakpastian dalam diagnosis pada sistem, mesin inferensi diimplementasikan murni berbasis aturan (*rule-based reasoning*) yang mengintegrasikan algoritma *Certainty Factor* (CF) melalui strategi *Dynamic Questioning*. Berdasarkan hasil pengujian fungsionalitas (*Blackbox Testing*) dan validasi sistem pakar menggunakan data rekam medis riil dari pakar, sistem menunjukkan nilai tingkat keyakinan diagnosis yang 87,5% sinkron dengan diagnosis dokter hewan. Hasil kuesioner *User Acceptance Test* (UAT) dengan skala Likert yang disebarakan kepada 16 responden menghasilkan nilai persentase sebesar 91,11% yang menempatkan sistem dalam kriteria "Sangat Baik". Implementasi sistem pakar ini diharapkan dapat meminimalkan kesalahan penanganan dini di lingkungan komunitas.

Kata Kunci: Sistem Pakar, Penyakit Kulit Kucing, *Certainty Factor*, *Website*.

ABSTRACT

Cats are one of the most commonly kept pets in Indonesia. Along with the increasing population of pet cats, health problems such as skin diseases have become one of the most frequently encountered conditions in the Meong Lovers Community. The similarity in symptoms among skin diseases increases the risk of incorrect initial treatment by cat owners due to limited medical knowledge, costs, and access to veterinary clinics. This study aims to design and develop a website-based expert system called Healthy Cat for independently detecting eight types of feline skin diseases. The system was developed using the Rapid Application Development (RAD) method and implemented using Python with the Flask framework, HTML, CSS, JavaScript, and a MySQL relational database. To address diagnostic uncertainty, the inference engine was implemented using rule-based reasoning by integrating the Certainty Factor (CF) algorithm through a Dynamic Questioning strategy. Based on functionality testing (Blackbox Testing) and expert system validation using real medical record data from veterinary experts, the system demonstrated a diagnostic confidence level that was 87,5% consistent with the veterinarian's diagnosis. The User Acceptance Test (UAT) questionnaire, distributed to 16 respondents using a Likert scale, yielded a score of 91,11% placing the system in the "Very Good" category. The implementation of this expert system is expected to minimize initial treatment errors within the community

Keywords: *Expert System, Cat Skin Diseases, Certainty Factor, Website.*