

ABSTRACT

EXPERT SYSTEM FOR IDENTIFYING FACIAL SKIN PROBLEMS USING CASE-BASED REASONING METHOD (CASE STUDY: MCM BEAUTY CENTER AJIBARANG CLINIC)

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Problems that occur with facial skin reduce women's self-confidence, especially in terms of appearance. Several factors influence the condition of women's facial skin, such as pollution, food and drink consumed, sun exposure, genetic factors, and lack of knowledge in using appropriate products. The MCM Beauty Center Clinic has problems, namely a lack of public awareness, namely people's ignorance about the condition of their facial skin, limited access because they only provide offline consultations and require an appointment first. The aim of this research is to build an expert system that can help to identify early facial skin problems in the form of acne, melasma and spots based on a website. This system will be realized in the form of a website by applying the Case Based Reasoning (CBR) method, which is designed to help patients who have limited time to consult directly with beauty experts. The CBR method has a first stage of collecting data in the form of symptoms from cases that have occurred before based on experts, then the data is processed using nearest neighbors and produces a decision as a treatment suggestion solution. As for the calculation process, using the nearest neighbor algorithm was chosen to determine the output in the form of facial skin problems by calculating the shortest distance between new cases compared to old cases. The implementation of a website-based expert system using the CBR method has been tested using black box testing and system precision testing. The results of black box testing of the system went as expected while precision testing showed results of 93% with 28 successful data out of a total of 30 data tested. By applying existing technology and knowledge, this expert system is feasible and useful for users in making more accurate, fast and efficient diagnoses.

Keywords: *case based reasoning, facial skin, expert system, website, identifying*