IMPLEMENTATION OF AN ARTIFICIAL INTELLIGENCE-BASED CHATBOT APPLICATION FOR INITIAL SCREENING OF HIV RISK GROUPS

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ABSTRACT

Human Immunodeficiency Virus (HIV) and *Acquired Immunodeficiency Syndrome* (AIDS) remain major health issues in Indonesia, particularly in Jember Regency, which ranks third in East Java for the highest number of cases. Negative stigma and fear of discrimination often prevent at-risk groups, especially adolescents, from undergoing voluntary health examinations. This study aims to develop an *Artificial Intelligence* (AI) based chatbot application that serves as an initial HIV risk screening tool and a private, easily accessible educational medium. The application was developed using the Waterfall method with a Rule-Based System approach utilizing Forward Chaining logic to determine the user's risk level. The system calculates risk using a weighted scoring method, classifying users into low, medium, or high risk. User feasibility evaluation using the System Usability Scale (SUS) yielded an average score of 89%, categorizing it as "Excellent." The application also provides a psychologist consultation registration feature as a follow-up for high-risk users. Consequently, this chatbot is expected to be an effective solution in increasing early HIV screening participation and providing psychological support without the fear of social stigma.

Keywords: *Chatbot*, HIV/AIDS, *Rule-Based System*, Screening.