

ABSTRACT

The increasing number of students at Telkom University Surabaya brings challenges to the Student Service Center (SSC) in providing responsive and efficient services. Students often face difficulties in finding academic and administrative information because there is no centralized and easily accessible information center. In addition, the high volume of inquiries results in limitations in service efficiency. Therefore, an innovative solution is needed to help improve SSC's work efficiency while providing students with fast and accurate access to information. This research aims to develop a web-based chatbot specifically designed to meet the needs of Telkom University Surabaya students. The method used in the development of this chatbot is Prompt Engineering, a new approach that utilizes prompt settings to improve the chatbot's ability to understand and respond to questions in a relevant manner. The development involves several stages, such as user needs analysis, YAML-based knowledge base building, integration with Google Generative AI API, and system performance testing. The backend of the chatbot was designed using Flask, while the frontend was developed using HTML and CSS to ensure a simple and functional appearance. The results of this research are expected to present a chatbot that is able to provide relevant responses to various student questions and run optimally on a web-based platform. This chatbot is expected to be an effective solution for SSC to improve work efficiency, reduce manual burden on officers, and provide easy access to information for students centrally. With this chatbot, it is expected to improve the quality of SSC services while providing an innovative digital experience for students. This solution can also be a model for developing similar digital services in other educational institutions.

Keywords: *Chatbot, Student Service Center, Prompt Engineering, Service Efficiency*