

ABSTRACT

Mental health is an important aspect that affects a person's well-being and quality of life. In Indonesia, the prevalence of mental health problems is quite high, especially among university students who are vulnerable to academic pressure, adaptation difficulties, and other problems. Based on these problems, this final project was developed to assist Telkom University students in maintaining mental health through the Sahabat Mental application. This application is equipped with emotion detection features through facial expression analysis using machine learning, a daily journal to record feelings, mental health articles, and daily motivation. Sahabat Mental application was developed using Jetpack Compose, a modern toolkit for declaratively building user interfaces in Android applications. The app also implements a clean architecture by applying Model-View-ViewModel (MVVM) to separate business logic, user interface, and view logic. This approach ensures a more structured and maintainable code. The database used is Firebase Cloud Firestore as user data storage. Testing was carried out involving 23 Telkom University students as respondents, consisting of 65.2% male students and 34.8% female students. The test results show that the Sahabat Mental application effectively detects mental health problems early and helps manage student emotions. Respondents responded positively to the user interface which was considered attractive and easy to understand. Articles and daily motivation features are also considered informative. Functionality testing using the white box method shows that all features run well and meet the specified success criteria.

Keywords: Mental health, emotion detection, Android application.