Sistem Presensi Siswa Menggunakan Pengenalan Wajah Dengan Metode MobileFaceNet Berbasis Mobile (*Student Attendance System Using Face Recognition With MobileFaceNet Method Based On Mobile*)

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ABSTRACT

Manual attendance systems that are still commonly used in schools today often lead to problems such as inefficiency, vulnerability to fraud, and difficulties in managing attendance data. These issues can reduce the effectiveness of school administration and the accuracy of student presence records. To overcome this problem, this research proposes the development of an automatic student attendance system using facial recognition technology based on the MobileFaceNet method. This system is implemented in a mobile-based application, aiming to improve the convenience and accuracy of attendance recording. The research involved 64 students from SMKN 1 Tapen as data sources, where each student contributed nine facial images used to train the recognition model. The training process was conducted using Google Colab, and the trained model was integrated into an Android application. The performance of the model was evaluated using a confusion matrix, resulting in an accuracy of 91.38%. Field testing conducted on 30 students with testing distances of 15cm, 25cm, 30cm from the student's face showed an average prediction success rate of 92.22%.. In addition, a User Acceptance Test (UAT) involving 15 respondents was carried out to assess the usability of the system, achieving a user satisfaction level of 78%. These results demonstrate that the system is functional, accurate, and well-received by users, making it suitable for use in a school environment.