

ABSTRACT

Stroke is one of the most serious diseases that requires continuous monitoring of the patient's condition to prevent recurrence and further complications. However, limited access to medical services and the lack of involvement from patient companions in the monitoring process remain significant obstacles. This study aims to develop a mobile application that supports the monitoring of stroke patients using facial recognition technology based on deep learning. The research adopts the Design Thinking methodology, which consists of five stages: empathize, define, ideate, prototype, and test. The application was developed using the Flutter framework and Firebase as the backend service. The monitoring process is carried out by analyzing the user's facial image to detect visual changes, such as facial asymmetry, as an indicator of the patient's condition. The evaluation results show that the application facilitates the monitoring process, both for patients who can use the app independently and for caregivers. System testing indicates that the core features function properly, and most users find the application easy to use and beneficial in supporting stroke patient care.

Keywords: stroke, monitoring, facial recognition, mobile application, deep learning, Design Thinking