

# **Development of a Smart Home App-Based Door and Fan Controller with Augmented Reality**

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## **ABSTRACT**

The rapid development of smart home technology allows users to control household devices more easily and efficiently. This research aims to develop a smart home app-based door and fan controller supported by Augmented Reality (AR) technology. This system allows users to control devices through an AR-based interactive interface displayed on a smartphone. The methods used in this research include hardware design using a microcontroller and sensors, as well as the development of an AR-based application that can connect users with household devices in real time. Test results show that the system can function well in opening and closing doors and controlling fan speed through the AR application. The implementation of this technology is expected to improve the comfort and security of smart homes in the future.

**Keywords:** Smart Home, Augmented Reality, Door Controller, Fan Controller, IoT.