

Abstract

Currently, there is a growing interest in *Smart home* systems using the Internet of Things. One of the most important aspects of the *Smart home* system is the security capability of being able to easily lock and unlock doors or gates. The main problem in smart home security systems is the low accuracy and image processing delay of around 70% -65% in the experiments studied using the KNN and Decision Tree methods. . This proposal proposes the *Deep Learning* method which has an accuracy of 80% or more. The methods used in this final project research are 1. Literature study on *SmartHome Security*, 2. Perform analysis and performance, 3. Test Algorithms for CNN, DNN, and RNN. It is hoped that the proposed *Deep Learning* method can obtain facial recognition accuracy above 80%.

Keywords: Smart Home Security ; KNN; Deep Learning; RNN;CNN;Decision Tree.

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