Audio Spoof Detection Integrated with a Home Automation System Using IoT

MAIN PROJECT REPORT

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BONAFIDE CERTIFICATE

Certified that this project **"AUDIO SPOOF DETECTION INTEGRATED WITH AN HOME AUTOMATION SYSTEM USING IoT"** is the bonafide work of **GOURAV GOPAL (1905015), NALIN SURIYA S (1905031), VISHAL KARTHIK S (1905060), YOKESH R S (1905062)** under my supervision during the academic year 2022-2023.

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Date :

ABSTRACT

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Authentication has become an essential aspect of our daily lives, with various authentication systems in place, ranging from traditional lock screens to biometric authentication systems. Among these systems, audio-based authentication has gained popularity, where users use specific words or phrases to unlock their devices and objects such as doors and mobile phones. However, the current audio authentication systems face a significant issue, as they only verify and extract the features of words and voices without classifying human voice and recorded human voices, leading to audio spoof attacks. To address this issue, the proposed system aims at using advanced machine learning models such as RNN and LSTM to classify human voice and recorded human voices, overcoming the problem of audio spoof attacks and recognizing the genuineness of the voice. The proposed system can be further integrated into any IoT system or home automation system, adding an additional layer of security to the accessibility of the device. The system's integration with IoT and home automation systems further enhances its security capabilities, making it a reliable authentication system for everyday use.

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