A Framework for Fall Detection Using Audio and Video Features

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Abstract—paper m kya kiya hai work related model ka btao
Index Terms—**Blockchain, EHR, PGHD, Medicalchain, RSA, Encryption,**

I. INTRODUCTION

As people get older, falling down becomes a big problem, especially for those 79 and older. Every year, about 684,000 people die from falls, says the World Health Organization. To tackle this issue, we're working on a new way to quickly spot falls using both sound and video. Most fall detectors need you to wear something, but our idea uses cameras and sound instead. Cameras in good spots watch for falls, and we listen for sounds that show someone needs help. This makes our system not only smart but also easy to use without bothering people. Adding sound helps us understand better if someone is in trouble. Our paper dives into how we teach computers to understand what they see and hear in real-time.

We also figure out how to handle tricky situations like low light or things blocking the view to make sure our system works well. But it's not just about tech stuff. We care about privacy and doing things the right way. We talk in our paper about being responsible with our system and making sure people's privacy is always respected. In a nutshell, our paper talks about a cool way to use cameras and sound to quickly notice when someone falls. We keep it simple and smart, aiming to make life better for older folks by getting them help fast.

II. LITERATURE SURVEY

Some research that has already been done to detect falls using audio and video processing techniques is as follows:

A simple method which involved using the aspect ratio of the subject's bounding box was used in [1]. This method depends on relative position of the person,camera and other obstacles. By mounting the camera on ceiling was a common solution adopted by most of the researchers to overcome occluding objects problem. [3] detected a fall using the 2D shape and velocity of the person. [7] used foreground seperation using pixel classification in order to differentiate between subject and background.Approximated ellipses and projection histograms to determine temporal changes of head position were used in [2].[6] also made use of techniques used in [7] and incorporated a color model(brightness distortion and chromaticity distortion)[4] and concepts like virtual height.

III. FALL DETECTION SYTEM

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A. Objectives

B. Challenges

Despite all the work done in this field in the recent years, there are still some clear challenges to overcome

1) **False Alarm** : Visual fall detection is inherently prone to high levels of false positive as what appears to be a fall might not be a fall, but a deliberate movement towards the ground. In other words, most of current systems are unable to discriminate between real fall incident and an event when person is lying or sitting

down abruptly.

2) **Accuracy of System** : Existent fall detection systems tend to deal with restricted movement patterns and fall incidents are usually detected in contrast with limited normal scenarios like walking; however in real home environments various normal /abnormal motions occur.

IV. PROPOSED WORK

proposed work theory will come here
will also contain architecture design

V. METHODOLOGY

1) Methadology will come here
flowchart data processingdata collection pseudo code and algorithms used

VI. CONCLUSION AND FUTURE WORK

future work and discussion will come here

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