BEHAVIOR RECOGNITION SYSTEM FOR HOMES USING IMAGE PROCESSING AND MACHINE LEARNING

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Abstract

Household people who are in fragile health conditions facing difficulties in houses has been increased massively because of the lifestyle of the modern era. Because of this competitive lifestyle, people are not spending much time in their houses. As people are working in irregular hours the safety and security of the loved ones in the houses has become a major problem. People are using security systems to overcome this problem to check video from the cameras. The number of daily elderly people and small kids who face accidents in their houses shows how inefficient these current systems are.

Through the investigations and researches carried out it was found that the making an accurate home security system with all the features in it is really difficult. After looking at previous researches and after analyzing many information, author derived a system which can detect unusual behaviors in order to give a solution for this problem.

Through the research and the solution was developed and the application named as Home Safe, which can detect unsafe and unusual behaviors and people in a household environment with an efficient result. This project involved challenging tasks with researching, system analysis/design and development with the use of sorted out resources and requirements.

Keywords: image processing, machine learning, motion detection, face recognition, behavior recognition