

20MCA246 MAIN PROJECT

SYNOPSIS

Deep Learning-Based Unfamiliar Person Identification in Surveillance Videos

Introduction

Video Surveillance Systems (VSSs) are commonly used in homes to improve security by keeping watch over the surroundings. These systems use video cameras to capture footage continuously and detect when someone unfamiliar enters the house. For this, the system uses Convolutional Neural Networks (CNN), a type of deep learning technology that is very good at studying video data. CNNs work by analyzing patterns in the footage, such as facial features to decide if a person is known or unknown. When the cameras capture video, the system carefully checks each frame to look for anything unusual. If it finds someone who is not recognized, it quickly sends a notification to a family member. This ensures the family knows about the situation right away. The system works on its own without needing someone to constantly watch the video, making it easy to use and reliable. This automated system is very helpful because it saves time and effort while keeping the house safe. It works continuously, even when no one is home, to ensure that any unusual activity is spotted immediately. By sending alerts quickly, the system allows family members to act fast if needed.

Objectives

1. To develop a home security system using Video Surveillance Systems (VSSs) and Convolutional Neural Networks (CNN) that can analyze video data to detect and identify unfamiliar individuals entering the house.
2. To implement an automated notification system that alerts family members immediately upon detecting unknown persons, ensuring timely responses and enhanced home security.

Scope and Relevance

This project aims to improve home security by using video surveillance with smart technology to detect unfamiliar people. It focuses on creating an automated system that continuously monitors the house, reducing the need for constant watching. If someone unfamiliar is detected, the system quickly alerts family members so they can respond right away. This project is important because it helps keep homes safe and secure by using technology to provide quick and reliable security alerts. It is especially useful in today's world where people are looking for easy and effective ways to protect their homes.

Keywords : Video Surveillance System, Convolutional Neural Networks, Facial features

Name, Roll Number and Signature with date