A

Project Report

On

EARLY FIRE DETECTION USING DEEP LEARNING

Submitted to

Department of
Computer Science and Engineering

By

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE

This is to certify that the project entitled "**EARLY FIRE DETECTION USING DEEP LEARNING**" is submitted by VAKKALA HARSHITHA(216Y5A0514), VELIGETI SHIVANI(206Y1A05A3), NAMPELLI SAMPOORNA(216Y5A0510) and JANAGAM BHAVANA(216Y5A0506) to the department of Computer Science and Engineering during academic year 2022-23.

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ABSTRACT

Fire is a flame, whether it is small or large, an undesirable place, situation, and time. In general, every place has the potential to experience a fire. But at this time, the smoke sensors are the most widely used devices to detect fires. Where the smoke sensors can only detect fires if the fire is large. So that a system is needed to detect early fires. Fire is an abnormal event which can cause significant damage to lives and property. In this paper, we propose a deep learning-based fire detection method using a video sequence, which imitates the human fire detection process. In this project, a video-based fire alarm system is designed, using a laptop and webcam as the main equipment. The method for using Convolutional Neural Networks (CNN) to identify fire. The system created has an accuracy rate of 99.49%.

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