VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

A PROJECT REPORT ON

"HELMET WEAR DETECTION IN VIDEOS FOR SECURITY OF ATM CENTER"

Submitted in partial fulfillment for the award of Degree of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE &ENGINEERING

By

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CERTIFICATE

This is to certify that the project entitled **"HELMET WEAR DETECTION IN VIDEOS FOR SECURITY OF ATM CENTER"** has been successfully completed by

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the bonafide students of **DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING, ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2020–2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

31/7/2021

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ABSTRACT

Automatic Teller Machine (ATM) is easy way to withdraw money as well as other Banking services; it has high risk so there security should be needed. Generally video surveillance system at ATM Centre captures every activities of user, but many times any fraudster does fraud wearing Helmet it is difficult to investigate and find them because of occulted face by helmet, so our system will automatically detects helmet in surveillance videos and generates alarm. Here, we proposed a framework to detect occulted face by wearing helmet in surveillance videos. We used object detection weight of yolo model, to get detecting person and helmet. Initially used background subtraction process to eliminate other part from video, further processing becomes ROI, and OPencv DNN is used. After that, will extract skin-color ratio and LBP feature. We experimentally evaluate the effectiveness of our approach in terms of speed and accuracy.