COURSE NAME	BACHELOR DEGREE OF COMPUTER ENGINEERING.
PROJECT TITLE	SMART INVIGILATION SYSTEM.
MODULE NAME	SENIOR PROJECT 1.
MODULE CODE	COB 4117.
STUDENT NAME	SHUKURU NICOLAUS DIMOSO.
REGISTRATION NUMBER	19100534050012
EXAMINATION NUMBER	19100534050012.
SUPERVISOR	LIHENDIME MADEMBWE
LEVEL	UQF-8-SEMESTER-I
ACADEMIC YEAR	2022-20223

CERTIFICATION

The undersigned certify that, he has read and hereby recommend for acceptance by MBEYA UNIVERSITY OF SCIENCE AND TECHNOLOGY(MUST) a project titled ‘SMART INVIGILATION SYSTEM in the fulfillment for the Bachelor of Computer Engineering at Mbeya University of Science and Technology (MUST).

(A SUPERVISOR)

Lihendime Madembwe.

Signature

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Date

……

DECLARATION

I, SHUKURU NICOLAUS DIMOSO, hereby declare that the work titled “Smart Invigilation System” has been carried out by me in the department of Computer Science and Engineering at Mbeya University of Science and Technology (MUST).

(A STUDENT)

Signature

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Date

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ACKNOWLEDGEMENT

I would like to thank my ALMIGHTY GOD for his life grace which enabled me to have time for project study and presentation. I would like also to thank my project coordinator, SHADRACK NJUGUNYA for his advices and allowance to work on this project.

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ABSTRACT

Examination cheating activities like face movement, head movements, hand movements, or hand contact are extensively involved, and the rectitude and worthiness of fair and unbiased examination are prohibited by such cheating activities. The aim of this project is to develop a model to supervise or control unethical activities in real-time examinations. Exam supervision is fallible due to limited human abilities and capacity to handle students in examination rooms, and these errors can be reduced with the help of the Smart Invigilation System.

This work presents an automated system for exams invigilation using machine learning and computer vision approaches i.e., Dlib and Opencv . Dlib is an object detection algorithm that is implemented to detect the suspicious activities of students during examinations based on their face movements, and for starting capturing the video of students Opencv is used.

The model is fully efficient in detecting and monitoring students in one frame during examinations. Different real-time scenarios are considered to evaluate the performance of the Automatic Invigilation System. The proposed invigilation model can be implemented in colleges, universities, and schools to detect and alert student suspicious activities. Hopefully, through the implementation of the proposed invigilation system, we can prevent and solve the problem of cheating because it is unethical.

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Name: Shukuru Nicolaus Dimoso

Email: juniordimoso8@gmail.com

Phone: 0628431507

Contents

LIST OF ABBREVIATIONS

OPENCV	Open Source Computer Vision.
SSD	Single Short Detector.
YOLO	You Only Look Once.
CNN	Convolution Neural Networks.
DLIB	Digital Library.
HOG	Histogram of Oriented Gradient