

### Project Work: Review-1 Report

<b>I. Work done details</b>	
<b>Proposed Title:</b>	<b>AI Based Exam Proctoring System</b>
<b>Abstract:</b>	
<p>The "AI-Based Exam Monitoring System for Fraud Detection and Attendance Tracking" is a cutting-edge project proposed for the B.Tech final year. This project aims to develop an intelligent and automated system that ensures exam integrity, tracks attendance, and detects fraudulent activities during online exams.</p> <p>The key features of the proposed system include :</p> <ul style="list-style-type: none"><li>• Face Detection for Participant Identification</li><li>• Real-Time Attendance Tracking to Excel Sheet</li><li>• Fraud Activity Detection</li><li>• Post-Exam Analysis</li></ul> <p>This project aims to create a comprehensive solution that combines facial recognition, attendance tracking, and fraud detection to address the challenges posed by remote online exams. Overall, this project serves as a robust solution to streamline the exam administration process, enhance exam security, and maintain academic integrity. By leveraging cutting-edge technologies, this project presents an innovative approach to conducting exams in a digital age. Its implementation will significantly benefit educational institutions.</p> <p><b>Tech stack:</b> Web technologies and Computer Vision techniques.</p>	

<b>II. Problem Statement:</b>
<p>The shift to online exams has introduced issues related to exam integrity, attendance verification, and fraud detection. Traditional methods of in-person invigilation and attendance tracking are no longer feasible, and existing online proctoring solutions often have limitations. These limitations include accuracy issues in participant identification, lack of real-time attendance monitoring, and difficulties in detecting sophisticated fraudulent activities. The proposed project seeks to overcome these challenges by developing an integrated system that employs facial recognition for participant identification, tracks attendance in real-time, and detects fraudulent behaviors during online exams.</p>

<b>III. Introduction</b>
<p>In recent years, the prevalence of online education has led to a surge in remote online exams. However, ensuring the integrity of these exams and tracking attendance accurately have emerged as significant challenges. Traditional methods of invigilation and attendance tracking are not as effective in the digital environment, which has prompted the need for advanced solutions that harness cutting-edge technologies. The proposed "AI-Based Exam Monitoring System for Fraud Detection and Attendance Tracking" aims to address these challenges by leveraging artificial intelligence and real-time tracking mechanisms.</p>

The proposed integrated system represents a promising solution to the challenges posed by online exams. By leveraging facial recognition technology, real-time attendance monitoring, and advanced fraud detection techniques, this project aims to restore confidence in the integrity of online assessments. Through careful implementation and iterative refinement, educators and institutions can be better equipped to uphold academic honesty and ensure a level playing field for all participants.

#### IV. Literature Survey:

##### Paper - 1

**Author names:** Chaitanya Thombare , Kushank Sapate, Aniket Rane, Ankush Hutke.

**Paper Title:** Exam Proctoring System.

**Journal Name or Proceedings Details:** International Journal for Research in Applied Science & Engineering Technology (IJRASET).

**Date:** 03/2022

##### Paper – 1 Summary:

The summarized abstract pertains to the response of educational institutions to the challenges posed by the Coronavirus Pandemic, particularly in terms of conducting online exams with effective invigilation. The proposed system employs behavior analysis through camera projections to monitor students during online exams. Behavior data is extracted, including head pose and test engagement, and stored in a SQL database. A predefined threshold for suspicious behavior triggers exam submission. This innovative approach addresses the need for reliable online proctoring and anti-cheating measures.

##### Paper – 2

**Author names:** Kakarla, S., Gangula, P., Rahul, M.S., Singh, C.S.C, Sarma, T.H.

**Paper Title:** Smart attendance management system based on face recognition using CNN.

**Journal Name or Proceedings Details:** IEEE-HYDCON.

**Date:** 10/2020

##### Paper – 2 Summary:

Amid the COVID-19 pandemic, virtual classes and meetings are prevalent, demanding a reliable attendance system. Traditional methods of online attendance fall short due to muted participants. Addressing this, a paper introduces an innovative edge computing-based solution. This tool, integrated with video conferencing, employs facial recognition to autonomously monitor attendees at random intervals, ensuring their continuous presence. The proposed method enhances attendance accuracy, promoting digital transparency in remote settings, and proves effective for sustained engagement during virtual lectures.

##### Paper – 3

**Author names:** Kohei Arai, Akifumi Yamashita, Hiroshi Okumura.

**Paper Title:** Head Position and Pose Model and Method for Head Pose Angle Estimation based on Convolution Neural Network.

**Journal Name or Proceedings Details:** International Journal of Advanced Computer Science and Applications ((IJACSA).

**Date:** 10/2021



**Paper – 3 Summary:**

The study focuses on the development of a novel method for estimating head pose angles using Convolutional Neural Networks (CNNs). The paper addresses the critical task of accurately determining the head pose angle, which has applications in diverse fields such as human-computer interaction, facial recognition, and virtual reality. To achieve this, the researchers propose a new model and method that leverages CNNs, a class of deep learning algorithms well-suited for image analysis tasks.

The study aims to contribute to the enhancement of head pose estimation techniques by utilizing advanced neural network architectures. The paper likely involves the exploration of data preprocessing, network architecture design, and training strategies to optimize the accuracy of head pose angle prediction.

**Paper – 4**

**Author names:** John M. ,Barbara P.

**Paper Title:** Cheating on Unproctored Online Exams.

**Journal Name or Proceedings Details:** Online Learning and Academic Integrity Journal.

**Date :** 03/2022

**Paper – 4 Summary:**

The researchers gathered data through surveys and analyses of academic misconduct instances in online educational settings. They found that cheating in unproctored online exams is a significant concern, with various methods such as utilizing external resources, collaborating with peers, and employing technological aids. It emphasizes the importance of maintaining academic integrity to ensure fair evaluation and valid learning outcomes in online educational environments. The study's findings contribute valuable insights for educators and institutions to devise effective strategies to combat cheating and enhance the credibility of online assessments. warnings of technology-based detection and penalties reduced cheating to 15%. Contrary to expectations, changes in cheating behavior did not impact exam performance.

**Submitted by:**

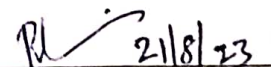
S.No	Roll No	Name of the Student	Signature of the student
1	209X1A05H6	P. Gokula Kishore Reddy	P. Gokula Kishore Reddy
2	209X1A05H9	V. Pranay Kumar Reddy	V. Pranay Kumar Reddy
3	219X5A05L9	M. Obula Sai	M. obula sai

**Project Guide Name & Designation**

Smt.B.Swathi

Assistant Professor

CSE Dept

 21/8/23

Signature with date