Online Exam Proctoring System using ML

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Abstract*: Importance of online education can be seen especially during the ongoing Covid-19 when going to schools or colleges is not possible. So validity of online exams should also be maintained with respect to traditional pen-paper examinations. However, absence of invigilator makes it easy for the examinees to cheat during the exam. Though there are already many systems for online proctoring, not all educational institutes can afford them as the systems are very expensive. In this paper, we have used eye gaze and head pose estimation as the main features to design our online proctoring system. Therefore, the purpose of this paper is to use these features to create an online proctoring system using computer vision and machine learning and stop cheating attempts in exams. Artificial Intelligence based Proctoring Systems also called as AIPS have taken the market by storm. Online Proctoring Systems also called as OPS, in general, makes use of various online tools to maintain the goodness of the assessment. During COVID-19 pandemic many exams were discontinued. Remote Proctored Theory and Objective Online Examination is a case study for providing a solution for conducting online examination instead of manual examination. This will be a web application that allows examinees to conduct the exam for examinees by colleges/universities/ organizations. This application will allow your theory as well as objective type's examinations for professional and non-professional courses. Based on our analysis we pointed-out that the security issues that are associated with the AI-based Online Proctoring Systems are multiplying. Major issues that can be considered while developing AIPS and OPS include Security concerns, Privacy concerns, Ethical concerns, Cost, Usage of technology and many more. The most reasonable conclusion we can reach in the present is that the usage of the AIPS and OPS is mainly based on the trust on the tool or software. To the best of our knowledge, we can say that there is no proof of analysis on how to make online proctoring more secure. Our research moreover, addresses the issues in AIPS in human and technological aspect. It also lists out various key points and new technologies that have been recently introduced while making significant impact on online education and Online Proctoring Systems in the mere future.*

Keywords: Artificial Intelligence, Online Proctoring, Online assessment

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