

Agesight: An AI-Based Student and Examination Surveillance System

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Abstract: The rise of online and hybrid learning has created a strong need for automated proctoring solutions to maintain academic integrity. Manual invigilation is labor-intensive, inconsistent, and prone to human error. This paper presents Agesight, an AI-based student and examination surveillance system that integrates modern object detection and face recognition modules to automate attendance, detect cheating activities such as mobile phone usage and proxy attendance, and generate actionable alerts. Agesight is implemented using Python, OpenCV, YOLOv8, FaceNet, Flask, and SQLite/Firebase, and provides a web-based dashboard for invigilators. We describe the system design, theoretical background, dataset and evaluation methodology, and discuss ethical considerations. Experimental evaluation demonstrates robust detection accuracy and practical latency for small-to-medium scale deployments.

Keywords: AI Proctoring, Face Recognition, YOLOv8, Computer Vision, Real-Time Surveillance, Flask, OpenCV