

AI-Assisted Remote Proctoring Solution

Helped a publication house significantly increase
Examinee to Proctor Ratio



Discover how our AI-assisted remote proctoring solution revolutionized online exams for a US-based publication client. Our advanced system provides centralized monitoring, real-time analysis of live feeds, and robust detection capabilities to ensure a secure and fair online examination environment for thousands of examinees.

About the Client

The client is a US-based publication house that has offerings in the education segment for learners and educators. They manage a worldwide network of test centers and deliver high-stake examinations to certify and license individuals.

The Challenge

Meeting the demand for online exams with enhanced exam integrity

Due to the COVID-19 pandemic, the education sector underwent a rapid transformation from offline to online-based systems. As a result, the client recognized an increasing demand for online exams and requested an AI-Assisted Remote Proctoring System to meet the increased demand for online exams while ensuring exam integrity.

The solution required centralized monitoring, detecting prohibited items and unauthorized persons during exams, and compatibility with low-configuration computers with basic webcams (<1 megapixel).



The Solution

Empowering online exams with customized AI solution

To address the client's challenges, we developed a customized AI solution that seamlessly integrated with their Proctoring System. Our technical approach involved developing a custom AI model for detecting prohibited objects like smartwatches, pencils, calculators, and books, and prohibited activities like looking away from the screen for a specified amount of time and moving away from the designated spot.

Our AI experts employed single-shot regression learning to draw bounding boxes and identify class labels accurately. A specialized module was deployed for checking stream quality for AI worthiness.

The solution's plug-and-play microservices-based architecture ensures future scalability. Real-time event tracking is enabled with start and end time markings.

Benefits Delivered

Experience efficient remote proctoring, prohibited item detection, and rapid response times

The solution resulted in an efficient remote proctoring system, with real-time analysis of live feeds, enabling central monitoring of large numbers of examinees worldwide.

The solution effectively detected prohibited objects and activities, including items like phones, smartwatches, and calculators, as well as behavioral analytics like eye gaze tracking, face detection and face based authentication.

The solution delivered a response time of less than 2 seconds for addressing malpractice incidents, with a false positive rate below 10% to minimize unnecessary alerts for proctors. It is also capable of handling a burst load of 10,000 webcam video streams.

The Impact

>5x

Increase in efficiency of
Examinee-to-Proctor ratio

<\$0.5

Cost per stream analytics

10,000

Videostreams processing
simultaneously