

# How Artificial Intelligence (AI) Enhances Online Proctoring Security

Meta description: AI-powered online invigilation systems are flexible solutions to detect academic dishonesty during assessments. Read the article to learn more about the benefits.

## How Can AI Improve Remote Proctoring Services?

Cutting-edge technologies are providing learning systems with new ways to securely and effectively assess students' academic honesty. Remote proctoring no longer restricts students to a physical location or a precise exam time due to the rapid technological revolution leading to the shifts in demands for advanced online proctoring solutions. Therefore, learning systems and students are embracing AI-powered virtual platforms, and they are now normal practice.

According to the forecast by IDC [Worldwide Semiannual Artificial Intelligence Tracker](#) shows worldwide revenues surpassing \$300 billion in 2024 with a five-year compound annual growth rate (CAGR) of 17.1%. Furthermore, due to the COVID-19 lockdown, the way examinations are now conducted and supervised has been transformed. So how can AI-enabled monitoring tools ensure enhanced proctoring security and holistic experience for both educators and students?

These systems are able to:

- Detect identity impersonation and fraud
- Reduce examination stress for students. No need to travel, students can complete their exam from the comfort of home.
- Discover content theft and collusion.
- Identify potential cheating behaviours using facial markers and iris tracking.
- Detect suspicious activities such as students using a second screen.

Before diving deeper into the benefits and values AI can bring to online proctoring, let's first examine the [online invigilation](#) methods.

## Types of Online Proctoring

Based on institution needs, requirements, and possibilities, online invigilation can be divided into three methods:

1. **Live proctoring.** This type of proctoring involves an invigilator who monitors the candidate via audio/video feeds. A proctor can intervene in the process at any time once he/she notices red flags and suspicious movements or any unverified devices that can be indicators of possible cheating.
2. **Recorded proctoring.** This method is more beneficial since it offers better protection of the invigilation process by recording screen-sharing feeds reviewed by a proctor after the

exam. Recorded proctoring also enables flexibility for students without the need to coordinate with the proctor.

- 3. Advanced proctoring.** It is an automated method that does not require any manual interference and provides the highest exam integrity level. Powered by AI algorithms, any malpractice is captured automatically so that it allows tracking an unlimited number of candidates. Moreover, this solution is less time-consuming and less expensive since humans are not required to be involved in the process.

## How Does AI-Powered Online Proctoring Work?

AI-powered online proctoring is an effective alternative to traditional proctoring and creates a cheat deterring environment where the exam integrity and security is ensured by integrating machine learning technologies. Artificial intelligence solutions are the most suitable for addressing identity and privacy concerns and organizing online surveillance efficiently and securely. The technologies used are below:

- Facial recognition. API facial recognition is used to validate the exam participant's identity and validate any misconduct by matching the student's face against their student identification photo.
- Audio. This feature allows the invigilation software to record all sound throughout the recording including talking and background noise. Irregular or loud audio is recorded as potential cheating as students should be taking their exam in a quiet room and not with other people in the room.
- Eye movement detection. If the candidate is involved in cheating activities trying to move his eyes to other objects, the system detects misconduct.
- Object/face detection. ML-driven algorithms allow scanning an exam tester's environment to monitor for objects that are not permitted during an exam. For example, the IRIS software can detect if any other faces are present in the testing environment.

## How IRIS Invigilation Helps Scale Online Examinations: Benefits

IRIS is a remote invigilation system identifying [academic dishonesty and ensuring assessment integrity](#). It records video, audio, and screen activity of a students' environment during an online exam. In contrast to traditional proctoring, the IRIS invigilation system eliminates the need for live accessor checking, which is time-consuming and expensive. Incorporating AI-powered technologies such as eye-movement tracking, facial recognition, voice recording, IRIS helps automatically identify dishonest student behavior by tracking face/eye movements, voice signals, and taking screenshots of their interaction with a screen. The IRIS system is geared to be integrated with any learning management systems. During the online assessment, all the data is captured, recorded, and then uploaded to IRIS. Afterward, educators can review the recordings on their institute's IRIS dashboard and further analyze if any misconduct is detected using the Summary and Full Report provided by IRIS.

So what advantages does the IRIS system offer?

1. The traditional live invigilation process is time-consuming and expensive when involving physical proctors and educators. The IRIS system allows autonomous targeting and flagging of suspicious activities and movements.
2. With AI algorithms, the accuracy of exam assessment is improved since there is an additional set of identifiers that capture all the data in real-time that may be difficult to catch by humans.
3. Online invigilation software ensures additional scalability allowing to conduct assessments without additional human resources.
4. Online proctoring systems ensure a seamless exam experience.

## Key Takeaways

Embracing AI technologies, learning institutions and educators can conduct online assessments more quickly and effectively with more enhanced capabilities. Moreover, AI and ML algorithms provide such benefits as scalability, rapid workflows, high accuracy, and assessment integrity. [Contact us](#) to learn more about how you can benefit from an online invigilation system and enhance your outcomes.