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The Future Of Education Powered By AI

AI is empowering a new generation of advanced, efficient security systems. In the field of education, AI is also facilitating the digital and intelligent upgrading of schools and institutions from K12 to universities. AI applications such as smart identification, deep learning and intelligent analysis greatly reduce manpower costs, while improving the security level and management efficiency at the same time. AI-enabled innovative teaching methods can help enhance engagement in both remote and in-person classes, and promote a conducive learning environment for students.

To give you a better understanding of how can schools benefit from utilizing advanced technologies like AI, here's a list of some of its campus applications:

1. Improve teaching performance with Dahua Deephub

Digitalization in the education sector has become a global trend. With the unprecedented offline-to-online transition of many classrooms, modern interactive whiteboard and blackboard have emerged.

The Dahua DeepHub Smart Interactive Whiteboard, for instance, provides an array of features including multifunctional writing, wireless projection, conference content sharing, etc., making it an ideal learning and teaching tool for classrooms and meeting rooms where demonstration, information sharing and document management are needed.

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The Dahua DeepHub offers low writing parallax for a paper-like writing experience. Contents and materials can be conveniently shared on the screen that supports 9 split screens and 4k UHD. The device is equipped with built-in camera and microphone ideal for life-like face-to-face video conferencing. It supports various educational tools and offers centralized device management.

In addition, the Dahua DeepHub is not just a powerful teaching tool with display capability, but also an all-in-one solution for interactive and hybrid education. With education software solution, teachers can present their pre-made interactive courses on Dahua DeepHub. They can utilize digital education tools such as virtual ruler, protractor, etc. or even interactive games with the students for a more lively class. Students can also participate and collaborate in the classroom or at home, using their own devices, to receive content, take a quiz, project their outcomes, or write on the same canvas. In Dahua DeepHub classroom, distance and education constraints are reduced by technology.

Alternatively, consider an all-in-one smart blackboard. With highly integrated design, it combines traditional blackboard writing with the advantages of touch screen, providing interactive human-computer enjoyment for classroom.

2. Broadcasting and recording system for hybrid teaching

Normalcy and resource imbalance during the pandemic have prompted developing countries to accelerate hybrid teaching solutions.

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With Dahua smart education solutions, teachers don't have to worry about students who can't participate in in-person classes. An intelligent camera such as the recently released 8MP WizMind Classroom Network Camera can automatically track and capture a teacher's lecture through AI algorithm. It also supports detection of class behaviors such as standing up, writing on the board, walking, etc. Broadcasting and recording server can integrate with multi-channel video streams to vividly restore the classroom scene, providing an immersive remote learning experience for students in different locations.

3. Prevent unauthorized entry into campus

Campus entrances and exits are areas vulnerable to external threats. A robust entrance and exit access control system is imperative in building the school's first major line of defense.

For example, installing an AI-enabled access control system can effectively prevent unauthorized entry into the campus, library, teaching buildings, dormitories and other school premises. Aside from that, the latest data management technology can be used to meet the daily needs of schools and students (e.g. attendance, visitors, vehicles).

Likewise, perimeter protection, the technology behind tripwire and line crossing function, plays a vital role in preventing invasions in surrounding areas or unauthorized access to regulated places. When unauthorized personnel and vehicles are detected, the system will send a real-time alarm to notify the control room, which can help eliminate security risks in the campus. Machine learning helps reduce false alarms by filtering out irrelevant objects like leaves, branches and even animals.

4. Detect violent actions in real time

Globally, school violence and bullying remain a serious problem. A report by UNESCO and the Institute of School Violence Prevention at Ewha Womans University (Seoul, South Korea) indicated that an estimated 246 million (20%) children and adolescents were subjected to some form of school violence each year. One of the recommended priority actions is to establish reporting systems and improve the collection of data and evidence.

For campus safety, today's comprehensive security systems have already integrated emergency management features. With the help of an AI sensor, 3D cameras with stereo analysis capabilities can identify fights, falls and other possible violent behaviors through deep learning. With real-time alarm in place, the school's security personnel can be informed in time about possible emergencies such as violence and falls, allowing them to intervene or respond accordingly. A one-button alarm system is also suggested in the campus premises to provide students with the fastest way to ask for help in case of emergencies.

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Best practices

As AI becomes more advanced and continues to gain traction in the security industry, it is imperative to carry out best practices in surveillance monitoring. Educating users regarding proper usage of technology and its benefits is strongly encouraged. Aside from that, data and privacy protection must also be prioritized at all times. Several central management software and platforms combine data and privacy security functions in order to help protect privacy while monitoring. Some of the measures being implemented are minimized data and private information, face/body mosaic technology, as well as security encryption of network transmission, storage, download, and export. Users also have an option to configure the storage duration of each video channel. Overall, these best practices are put into action to help ensure privacy protection and promote responsible monitoring.

Scenario Application

Taking video-centric AI as its core, Dahua Technology actively contributes to the modernization of education and aims to create a safe and pleasant environment for students, teachers and staff. Dahua Smart Education Solution adopts all the aforementioned technologies above with focus on safe campus and smart teaching. Furthermore, Dahua also focuses on minimizing cheating behavior in student examinations and on harnessing intelligent teaching and learning platforms for modern digital classrooms.

In 2021, Dahua assisted the Egyptian Ministry of Education in regulating the country's college entrance examination by deploying an examination room network system for 1,800 examination centers. "I am the happiest person on this picture that shows the installation of surveillance cameras in all high schools. This is a step that will raise the efficiency of education, because it will abolish the idea of cheating and will regulate the behavior of the students and the observer during the examination," says the spokesperson of the ministry.

Check out more education projects of Dahua here.

About Dahua Technology

Dahua Technology is a world-leading video-centric smart IoT solution and service provider. Based on technological innovations, it offers end-to-end security solutions, systems, and services to create values for city operations, corporate management, and consumers. With more than 22,000 employees (over 50% engaged in R&D), Dahua has deployed its products, solutions, and services in 180 countries and regions, covering key industries including smart city, traffic management, retail, banking & finance, energy, etc. Since 2014, Dahua Technology has been estimated to be the world's second largest supplier of video surveillance equipment, and has been ranked 2nd on the a&s Security 50 list for 4 consecutive years.

To learn more, visit the Dahua Blog or follow us on Facebook, LinkedIn, YouTube and Twitter.

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