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About

Ai-RGUS helps companies safeguard their investment in security cameras via its proprietary software solution. The solution—invented at Duke University after their CIO and chief of police identified a need to ensure that each of the more than 2,000 cameras on campus were working and capturing usable video—uses AI to verify that security cameras continue to produce the video evidence users expect to have and to improve safety and security on premises.

The software automatically alerts users about any problems with the security camera evidence they expect to have or a lapse in cybersecurity. Ai-RGUS' user interface saves operators' time by streamlining the inspection process for camera issues.

As a result of using Ai-RGUS, the Duke security team reduced the time spent inspecting 2000-plus cameras **from 4 hours a day to 5 minutes**, significantly reducing the workload and the average time cameras are unhealthy.

Ai-RGUS features

Ai-RGUS uses the latest AI to verify that the view from the security cameras is clear. It uses reference image(s) for each camera to compare those against the current view of the camera to identify view problems that affect the quality of the video evidence. The AI filters out view changes that are not a "view problem" such as seasonal changes or a temporary object in the scene such as a person or car passing by.

Ai-RGUS ensures:

- All devices in the security camera system are "on", such as the cameras, NVRs, and servers
- Each camera produces an image
- And that the image from each security camera is clear and has no problem of block, blur, tilt, low-light, and glare
- For each camera, have confirmation Confirms each the camera is currently recording and that it is retaining the number of days of recording to match the requirement from an organization
- Time stamp correctness, including timezone issues

Ai-RGUS cybersecurity offers:

- The ability to update passwords and set company complexity and expiration policies
- Update firmware for cameras that support it

Ai-RGUS provides users:

- Fully customizable reports
- A dashboard with detailed information about the results of each inspection & system performance historical information
- A manager to change reference images and to keep them up to date
- An actions manager to export information to email or tickets
- The ability to check the status of devices on-demand
- The ability to reboot devices

Examples of companies Ai-RGUS works with:

- Avigilon, Axis, Cognyte, Digital Watchdog, Eagle Eye Networks, Exacq, FLIR, Genetec, Hanwha, Honeywell, Milestone, Mobotix, Panasonic, Qognify, Salient, Verkada

Executive Biography
Daniël Reichman, Ph.D., CEO and Chief Scientist

Dr. Daniël Reichman is an engineer with primary expertise in translating intuition into carefully designed artificial intelligence algorithms so a computer can automate the task. His passion is to develop algorithms to improve quality of life by automating routine tasks. Currently, Dr. Reichman is the CEO and Chief Scientist of Ai-RGUS, an AI startup he founded. Ai-RGUS is commercializing AI software Dr. Reichman's lab at Duke developed for the university, at their request, which automatically verifies that security cameras always produce the security video they were intended to capture thereby ensuring that video evidence will be available after an incident.

Dr. Reichman obtained his doctorate in Electrical and Computer Engineering from Duke University in 2017. The program was fully funded by the U.S. Army Research Office. The goal of his doctoral work was to develop new algorithmic capability for automated buried threat detection such as landmines and unexploded ordnances to replace the previous generation of algorithms onboard U.S. military equipment. He has 24 publications and has co-advised students at the undergraduate, masters, and doctoral level. Before Duke, he graduated from the Cooper Union in New York City, with his Masters and Bachelors in Electrical Engineering and a minor in Mathematics at age 21. Dr. Reichman skipped the third grade and therefore was accepted at age 16 during the 2008 financial crisis - the most selective year (6% acceptance rate). He was fully funded for both degrees and completed both degrees in four years. Over the years, Dr. Reichman has successfully completed consulting projects including the development of software to assist reading more than 10,000 pages that needed to be summarized for a book. He also passed the first two actuarial exams and consequently, developed software to automate aspects of financial projection of New York Life Insurance Company's portfolio of liabilities.

Dr. Reichman is a past board member of the Durham Eruv, a community-wide charity project that required raising over $50,000 for a construction project and managed that construction project with a successful completion in April 2019.

Click here to connect with Daniël on LinkedIn.

Press Release

Ai-RGUS Takes Major Leap in Growth and Reach in 2022

The AI software firm expands into 50 States, improves cybersecurity management.

LAS VEGAS – Feb. 2023 — Ai-RGUS, the artificial intelligence (AI) software company helping organizations protect multi-million dollar investments in security cameras and improve safety and security on premises, announced expansion into all 50 states in 2022.

"The past year brought tremendous growth for Ai-RGUS and we are optimistic about what's to come in 2023," said Daniël Reichman, Ph.D., CEO of Ai-RGUS. "As a company, we intend to expand throughout the U.S. and continue to reach new customers concerned about security risks. A surveillance device is only as good as the software making sure it is operating as intended and producing the video evidence you expect to have, that it's recording, and this is becoming a focal point for an array of industries."

The company's rapid growth in 2022 can be attributed to continued partnership with the world's leading commercial video surveillance camera manufacturers, development of a cybersecurity system, 25 new partnerships with system integrators, and further with additional system integrations. Part of Ai-RGUS's acceleration comes from its recent firmware upgrades and improved cybersecurity management. These developments to the technology include password changes, rebooting devices remotely, and automating firmware upgrades.

Ai-RGUS uses AI to verify security cameras are capturing clear images and producing usable video evidence. A $43.9B worldwide market, video surveillance cameras can be obstructed from capturing images, rendering the recorded footage unusable. Reichman added that by using its proprietary software solution, Ai-RGUS's clients have peace of mind knowing that each camera unit is working correctly. Knowing that the software is 99.9% accurate at detecting unhealthy cameras, it reduces risk and increases compliance while saving businesses money and staff time to manually check each camera and video feed for those problems.

Ai-RGUS's software was originally developed by a team at Duke University to improve safety and security on premises. The need was identified by Duke University's CIO and Duke's Chief of Police who recognized an unmet need for 2,000 cameras covering student housing, retail outlets, transportation terminals, and other mixed-use areas. Duke funded the initial development of this solution.

Ai-RGUS is named after Argus, the all-seeing giant from Greek mythology—the 'i' in Ai-RGUS is silent, and showcases the technology using AI. Ai-RGUS monitors all cameras within a security system to alert users if the image is blurred, blocked, displaced, damaged, etc. This allows camera operators to fix the problem immediately and not risk using a faulty camera when it's needed.

Ai-RGUS stresses the importance of having in place a system for monitoring the operation and functionality of the camera system. System integrators installing the Ai-RGUS solution have a source of recurring revenue while providing a higher level of service to their customers by optimizing safety and efficiency for security management clients.

About Ai-RGUS

Ai-RGUS uses AI to help organizations protect multi-million dollar investments in security cameras and improve safety and security on premises. Based in Las Vegas, Ai-RGUS provides a software solution which uses the latest AI to ensure security cameras are operating optimally and to alert users automatically. Ai-RGUS monitors all cameras within a security system to alert users if the image is blurred, blocked, displaced, damaged, etc. Used by organizations throughout the world, Ai-RGUS is used by industry leaders in retail, municipalities, universities, schools, airports, gasoline stations, parking lots, jails, and hotels. To learn more, visit https://ai-rgus.com.

Connect with Ai-RGUS on Twitter, Facebook , LinkedIn, YouTube , and Instagram .

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Ai-RGUS has been featured in:

(Clicking on a logo will open the featured media)

Entrepreneur Tribune

SJA SECURITY JOURNAL
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Industry today

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SECURITY JOURNAL

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Security Sales
& Integration

Featured Q&A with our CEO:

ISJ INTERNATIONAL SECURITY JOURNAL

The software securing surveillance

📅 March 10, 2023   🕐 9:40 am

International Security Journal sits down with Daniël Reichman, Ph.D., CEO and Chief Scientist, Ai-RGUS.

James Thorpe

Can you tell us about the background behind Ai-RGUS?

I was wrapping up my Ph.D. in electrical and computer engineering at Duke University when the Chief Information Officer approached my lab group to create a solution to ensure that the 1,100 cameras on campus functioned as they should.

It seems like a simple solution would be to just manually check every camera every day. But, for an institution with even hundreds of cameras, this task can be both tedious and subject to human error. So, we developed an artificial intelligence-based software that monitors security cameras and makes sure that they are all working according to a base/desired image.

I spun off this technology developed for Duke into a company, now known as Ai-RGUS. Since then, we've modified and added many components to our offering. Ai-RGUS is now a leading software solution which verifies that security cameras are operating optimally and alerts users automatically if a camera has a problem.

How has surveillance developed over the past decade?
In the past decade, surveillance has benefited tremendously from several technological advances. This includes the development of deep learning which has drastically improved the accuracy of artificial intelligence (AI) on imagery (among other modalities), the cheaper cost of computational hardware and the availability of higher internet bandwidths across the US.

These advancements have made new business opportunities economically possible. One example is the remote guarding paradigm to crime deterrence, where remote operators leverage AI-based automated event detection to monitor a much larger collection of cameras than was previously possible when human operators were continuously watching a handful of cameras.

These advances have also enabled camera system users to find specific information in their massive collection of surveillance videos. Rather than having people manually sift through the video, which can take hours or even days to accomplish, running the AI computer program conducts the task much faster.

How important is it to provide low cost, easy to use AI solutions?
Currently, one of the most effective ways to leverage AI is by using it to identify objects or events of interest. Highlighting if there is crowding within a certain area, detecting excessive motion somewhere you do not expect it or finding if a camera was tilted away from its intended view are all examples of AI doing its job.

Considering that a camera system's fleet can grow to be hundreds, thousands or even tens of thousands of cameras, it can be very costly to have people continuously monitoring for irregular events. Using AI solutions divides the labour by letting humans inspect those events of interest and determine whether further action is required.

When such AI solutions are accessible, safety is improved because human operators without AI cannot provide the level of monitoring that is often required to keep people on their premises safe.

Maintenance is a critical, often overlooked part of the surveillance sector – how does Ai-RGUS make inspection and upkeep easy?
Ai-RGUS' user interface saves operators' time by streamlining the camera inspection process. Our software automatically alerts users about any problems with their security camera evidence they expect to have. We use AI to verify that security cameras are capturing clear images and are producing usable video evidence.

This includes automatically catching camera view problems such as: Problems due to blur, block, tilt, glare or low-light; camera/NVR/DVR misconfigurations or failures; wrong timestamp; missing or not enough days of recordings.

Users also get reports, alerts, statistics and even work orders to make correcting your cameras' wellness easy. These key features include frequent inspection, providing a shortlist of unhealthy cameras for manual review, customised reports of camera and/or image issues and collecting historical camera system health statistics.

With Ai-RGUS, users are also able to implement a comprehensive cybersecurity program. With the software, security managers can remotely remediate an array of issues, including the ability to change out-of-date or insecure passwords, reboot devices and cameras as well as update firmware versions.

Daniël Reichman

Daniël Reichman, Ph.D. is the CEO and Chief Scientist of Ai-RGUS, an AI start-up spun out of Duke University. After receiving his Ph.D. at age 25, Dr. Reichman founded Ai-RGUS.

With over 24 university publications, Dr. Reichman obtained his doctorate in Electrical and Computer Engineering from Duke University from a program fully funded by the US Army Research Office. He also successfully completed the first two actuarial exams and obtained a minor in Mathematics.