



# Get a grip: Prevent slip-and-falls with AI-powered solutions

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Slips. Trips. Falls. These “big 3” are among the leading causes of work-related injuries.

In fact, according to the **NSFI**, [<https://nfsi.org/nfsi-research/quick-facts/>] 85% of workers' compensation claims are attributed to employees slipping on slick and wet flooring. Common causes of slips include debris, machine lubricant, fluids or bever

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still prone to human error. That is why many manufacturers are turning to artificial intelligence (AI) solutions to provide a more reliable way to not only identify, but mitigate risks as they occur in real time. AI-driven solutions allow companies to be proactive, not just reactive to workplace injuries.

Most slip-trip-fall (STF) cases are caused by a lack of active monitoring and shortcomings in safety practices. Slip-and-fall injuries are especially prevalent in manufacturing, warehousing and construction industries which need to be ever vigilant with their workplace safety programs.

One of the key benefits of leveraging an AI-powered hazard detection system is that it automates those activities that humans are incapable of doing or are prone to getting wrong. It provides another set of eyes and helps keep hazards from *slipping* past their radar.

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AI technology uses computer vision to detect movement and patterns

Systems like this train the computer to act like the human eye, seeing and understanding objects that are placed in front of it. For this to happen, the computer uses algorithms to process images, which allows it to quickly understand and diagnose deficiencies.

The HGS Digital whitepaper, "***A new frontier: Can artificial intelligence save lives in the workplace*** [<https://hgs.cx//white-papers/a-new-frontier-can-artificial-intelligence-save-lives-in-the-workplace/>] ?" further explains that using image recognition and artificial intelligence, companies can proactively monitor and identify the spills . **HGS Digital's Bots & Brains approach to workplace safety** [<https://hgs.cx//digital/solutions/artificial-intelligence-workplace-safety/>] is supported by its Security Operation Center which monitors sites remotely, training the AI cameras to determine what is false and what is positive, with the ultimate goal of turning platforms into a fully automated, intelligent hazard detection (IHD) system.

Workers can support IHD with on-the-ground technology, including mobile apps for on-the-job hazard detection. Additionally, with image recognition, the IHD system can ensure employees are wearing the required personal protective equipment when in the workplace.

Increasingly, manufacturers and other types of businesses are deploying Internet of Things (IoT) technology to send real-time alerts to address accidents, including fall hazards, sooner. For example, GPS directions can alert a workplace's cleaning crew to clean up the spill as soon as it occurs and can track employees leaving the spill, warning them to avoid the area.

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identify a problem using hard facts enabling worksite managers to subsequently develop a well-informed, evidence-based solution. It takes the guess work out of addressing safety issues, allowing you to better visualize workplace incidents, address them in real-time and make improvements that mitigate future events. Using analytics and visualization tools, you can identify opportunities to hit key safety objectives such as reducing incidents and near misses, improving emergency response time and eliminating safety worksite safety hazards.

In addition to video and image analytics, manufacturers are leveraging connected safety wearables to improve workplace safety. When using cloud-connected wearable devices, data from each device can be streamed directly to the cloud. Fall detection technology is designed in such a way that the detection sensitivity is adjustable while also providing the worker with the option to check in and confirm that all is ok, otherwise an external team is notified. Falls can be differentiated from other work activity, and if a connected wearable is dropped, the worker can check in and confirm that all is well to avoid an alert to a live response team.

In alignment with IHD, these employee wearable devices can monitor psychological changes of workers and provide real-time help. "AI, along with wearables, can proactively monitor the psychological changes of the worker and can provide the required needed medical help in real time," noted Yasim Kolathayil, HGS Digital Director, Data Engineering and Data Science. "This innovative approach will keep the workers healthier and will reduce on-the-job injuries as well as healthcare costs."

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augmented reality and AI provide the visibility and intelligence to identify hazards, prevent injury and reduce overall risk — empowering organizations to build a virtual safety net for their employees

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To learn more, download our whitepaper "*A new frontier: Can artificial intelligence save lives in the workplace* [<https://hgs.cx//whitepapers/a-new-frontier-can-artificial-intelligence-save-lives-in-the-workplace/>] ?"

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