Modern Manufacturing Training in XR

A Comprehensive Guide by **siminsights**

Our no-code authoring platform, HyperSkill, is enabling our customers to rapidly author, deploy and analyze XR learning content.

Welcome to SimInsights' comprehensive guide for modern manufacturing training in XR.

In the post-COVID world, when manufacturing is trying to get back to normal again, organizations usually face a severe challenge - shortage of skilled labor. Meanwhile, continuous machinery advancement has been gaining pace. Hence, manufacturers need more innovative and rapid way to grow their employees' skills instead of increasing their training budgets.

As a seasoned training partner, experience in creating several manufacturing training and assessment programs, we know what how to make it easy to develop your XR training content.

Let's get started

Benefits of Training in XR

Growth and Innovation

Essentially, manufacturing training prepares employees for their job, which drives innovation and growth in an organization.

Higher Productivity and Efficiency

Inadequate training is a guaranteed recipe for resource wastages, time loss, and costly mistakes. Well trained workers ensure desired efficiency and productivity.

Increased Job Satisfaction

Organizations with well trained see increasingly save and efficient employees, who are quite satisfied with their jobs. Hence, the turnover rates are lower.

Greater Safety

Manufacturing process invariably has numerous safety risks, while traditional training methods are impractical in dealing with each potentially hazardous situation. Fortunately, perilous scenarios can be safely simulated in VR using HyperSkill.

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HyperSkill Training Use Cases

Manufacturing training and evaluation varies across industries and organizations. However, the typical use cases fall under four broad categories: equipment operator training, process training, safety training, and skilled worker hiring and evaluation

Equipment Operator Training

Whether it is onboarding of new hires or reskilling/upskilling of existing employees, XR training with HyperSkill reduces training period, and improves skills transfer. HyperSkill provides a low-risk, high fidelity immersive simulation, which provide the same benefits as real-world practice, without the real-world risks.

Case study: Shaw Industries, a leading manufacturer, is using HyperSkill for onboarding of its new hires. An innovative high fidelity VR-based immersive, interactive and intelligent simulation based onboarding training program was developed. The program was pilot tested to evaluate ROI and found to deliver excellent outcomes. The program was then deployed into production, and is serving as a model for other plants in other states in the US.

Process Training

Manufacturing consists of numerous complex processes to transform raw material into end products. Processes where XR training has unique benefits are product assembly, machining, casting and molding, chemical reactions, batch processing, standard operating procedures, etc.
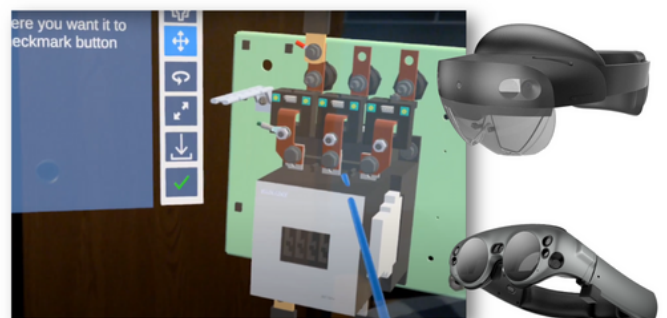
Case study: Semikron uses HyperSkill with AR glasses for training employee in power semiconductor product assembly. The learner is guided in all the steps involved in assembling the final product.

The AI powered computer vision module automatically detects any anomalies at every step. This allows the learner to automatically verify their work at every step of the assembly process.

Safety Training

For any manufacturer, it is critical to train the employees so that they are knowledgeable in Standard Operating Procedures (SOPs) and prepared for any adverse incidents. Safety training teaches employees the standard practices to keep everyone, including themselves, safe while on the job.

HyperSkill enables manufacturers in safety training in various scenarios such as:

- Safety Awareness
- Hazard Recognition
- Safe Operation of Machinery
- Safety Incidence Simulation
- Safety Training Drills

Skilled Worker Hiring and Evaluation

An emerging application of HyperSkill in manufacturing sector is in skill-worker hiring. With machinery that is continuously advancing and lack of technical certifications related to novel manufacturing processes, it is becoming increasingly difficult to evaluate new hires. Judging proficiency of an applicant in operating a particular machine is quite difficult using traditional interviewing methods.

SimInsights has solved this problem with by creating simulations, where the player is presented a problem, and data is collected on how the player goes about solving it.

Case study: The ARM institute is using highly realistic VR simulation created using HyperSkill to evaluate technicians for their proficiency in operating a robotic arm. When the simulation begins, the player is presented with a troubleshooting problem with a robotic arm. All the required tools are provided to the player in order to identify and fix the issue. In the background, various data relating to user actions is collected. Eventually, this data is used to give a proficiency score to the player.

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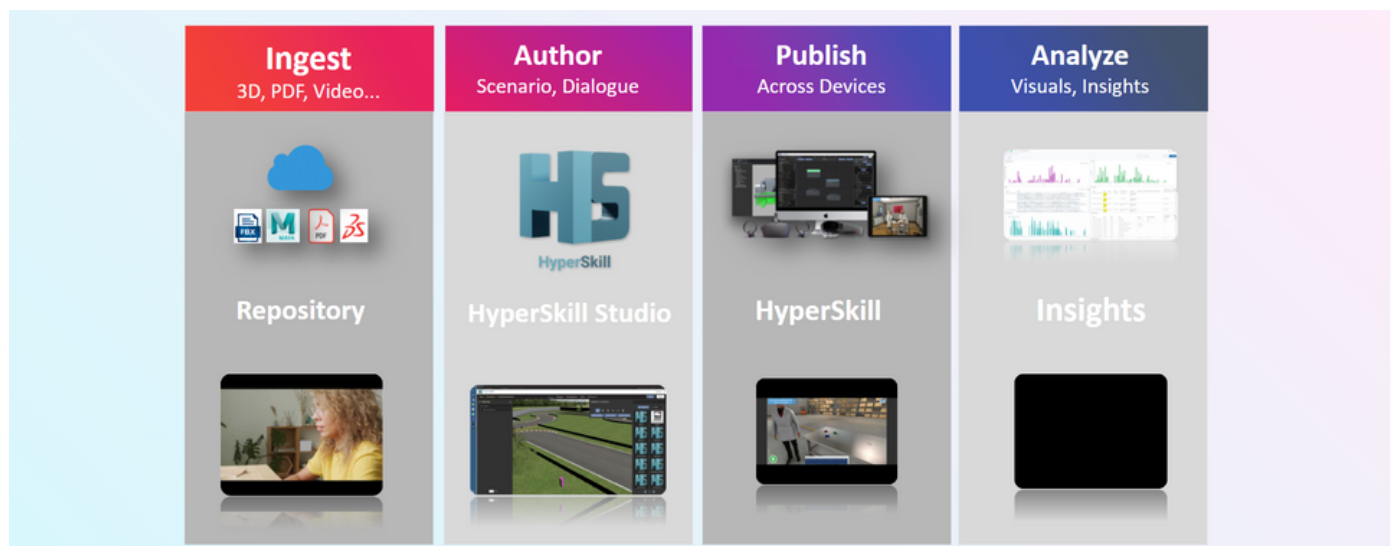
How does it work?

HyperSkill: No-Code XR SaaS Platform for Transforming Training

What is HyperSkill?

HyperSkill is a no-code 3D simulation authoring software for both Virtual and Augmented Reality. HyperSkill was created to enable instructional designers to create immersive training content without having to learn programming. Users can unlock the value of existing CAD and 3D assets by injecting them into HyperSkill and creating immersive simulations around them. HyperSkill also supports LMS integrations, so that content creators can log and report fine grained metrics related to content and learner proficiency on targeted knowledge and skills.

Authoring with HyperSkill

Ingest	Author	Publish	Analyze
3D, PDF, Video...	Scenario, Dialogue	Across Devices	Visuals, Insights
Repository	HyperSkill Studio	HyperSkill	Insights

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