RENDERED.AI

Synthetic Data for Computer Vision Teams

Discover how synthetic data can revolutionize your AI and ML outcomes

Contact us at **sales@rendered.ai**

Cost and Time

Teams struggle with getting started quickly when trying to build new algorithms due to the cost of purchasing data and delays in acquiring real datasets

Barriers to Opportunity

When working with new sensors or planning for new scenarios, teams simply can’t obtain real data to train and validate AI-based systems

Bias

Real datasets only capture what can occur in the factory or in the field, leading to algorithms that are biased against what can’t be captured

Data Labeling Accuracy

Inaccuracy in both human and automated labeling for real datasets can lead to degraded performance, cutting down on the value of expensive acquired data

Training AI is hard!

When using only real sensor data, computer vision users encounter common problems that span across industries, slowing down the ability to deploy and benefit from AI and ML

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Synthetic data solves real data issues

Gartner estimates that by 2030, synthetic data will completely overshadow real data in AI models

Read more on the Gartner site

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Cost-effective and on-demand

Synthetic data is generated using computer graphics techniques that can run in scalable cloud compute at the push of a button

Physically accurate

From lens aberration to atmospheric effects, Rendered.ai focuses on physically accurate data that emulates pixels captured by real sensors

Engineered

From objects-of-interest to complex scenarios, synthetic data generation allows computer vision teams to design the variety and distributions that they need for training

100% accurately labeled

Generating synthetic imagery and video out of a virtually assembled 2D/3D environment allows perfect labeling, even for parts of objects that can’t be seen

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5 steps to success with synthetic data

A platform helps you throughout your AI/ML synthetic data adoption, from early experimentation to production value and pipeline integration

1 Define your computer vision application

We find that many customers are focused on datasets and don't yet know the specific application of computer vision that will bring them value. Often, their first guess is not correct! What is special about your sensor or circumstance?

2 Use best-in-class tools to create data

Rendered.ai partners with organizations such as NVIDIA, Esri, RIT, and Quadridox to enable a variety of simulation capability within a common open-source platform for synthetic data generation.

3 Iterate and experiment

Even when using real data, teams rarely find success with the first images. Synthetic data allows teams to experiment with scenarios and dataset characteristics to build toward synthetic data that works and the right mix with real and synthetic data to achieve real results!

4 Integrate synthetic data generation

AI is an enterprise capability and so is synthetic data. A synthetic data platform like Rendered.ai provides APIs for integration into a robust AI pipeline for on-demand dataset generation and configuration.

5 Don't start each project from scratch

Rendered.ai enables teams to build synthetic data applications in a collaborative experience that allows reuse of content, code, and workflows, enabling synthetic data capability to grow with the team's computer vision business requirements.

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How to talk with your computer vision team about synthetic data

Common questions from data science teams about synthetic data creation and application

Rendered.ai is a SOC 2® Type 2 compliant organization as certified by an independent service auditor

Frequently Asked Questions

Q: What is physically accurate synthetic data?

A: Rendered.ai works with our customers and partners to help simulate data that emulates the real capture properties of physical sensors such that AI interprets generated data as if it is real imagery or video.

Q: Do we need 3D and simulation skills?

A: Depending on a customer's level of technical skill, their team may build synthetic data channels on their own, use starter content from Rendered.ai, or engage with Rendered.ai to build a channel. Once a channel is set up, data scientists can generate datasets using our web-based experience without needing 3D or simulation skills.

Q: Will we pay for imagery that doesn't work?

A: Rendered.ai provides a subscription model based on compute access, not consumption. We know that customers need to generate data to get started and they can generate a little data or a lot, both during initial experimentation and during production, depending on their specific data needs.

Q: Can we create synthetic data for sensors that don't yet exist?

A: Yes, a common application of synthetic data is to simulate the anticipated properties of future data collection, including file formats and annotation types, to start training AI and validating data pipelines.

Q: Can we stop using real data?

A: While we find that some customers can get started training algorithms with purely synthetic data, in most cases, customers will use a mix of real and synthetic data. Rendered.ai provides tools to help assess the quality of synthetic data and the mix of real and synthetic that might fit your applications.

Q: Do we need real datasets to get started?

A: You don't have to have real datasets to start creating synthetic data with Rendered.ai. In our platform, users can deploy models trained on real data for a post processing technique, called domain adaptation, to help synthetic data have more properties of real datasets.

Q: Does Rendered.ai work with Generative AI?

A: We are exploring the use of Generative AI, but our typical customer application uses simulation and 3D technology for data generation especially for physically sophisticated sensor such as x-ray and SAR.

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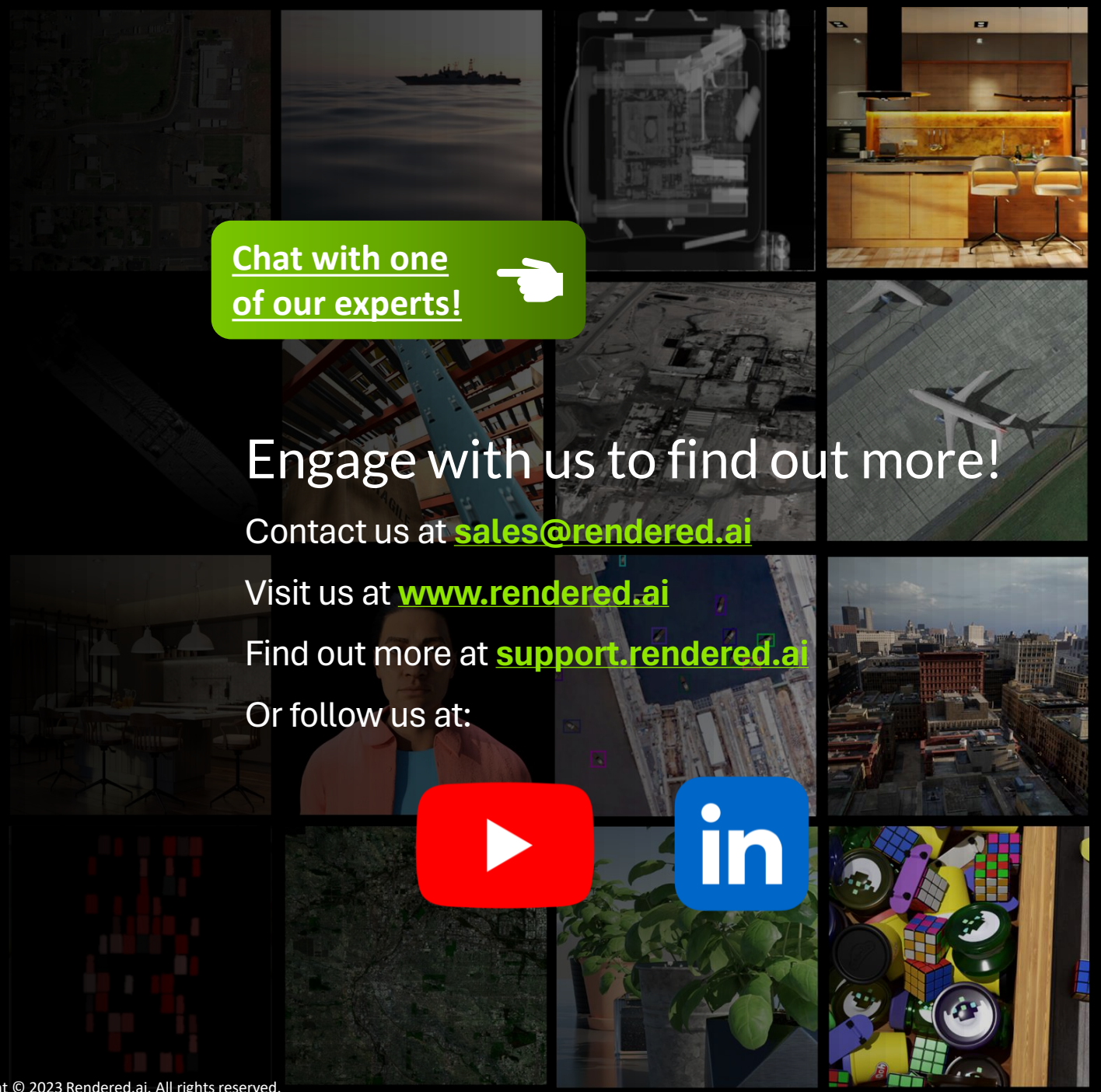
About Rendered.ai

Rendered.ai is a Platform as a Service that enables data scientists, data engineers, and developers to create and deploy unlimited, customized synthetic data generation for computer vision-related machine learning and artificial intelligence workflows, reducing expense, closing gaps, and overcoming bias, security, and privacy issues when compared with the use or acquisition of real data. Rendered.ai makes it easier for users to create synthetic data for enterprise workflows by providing a collaborative environment, samples, and cloud resources to quickly get started.

Rendered.ai is a privately held company based in Seattle, Washington and serving customers since 2019.



Chat with one of our experts!

Engage with us to find out more!

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