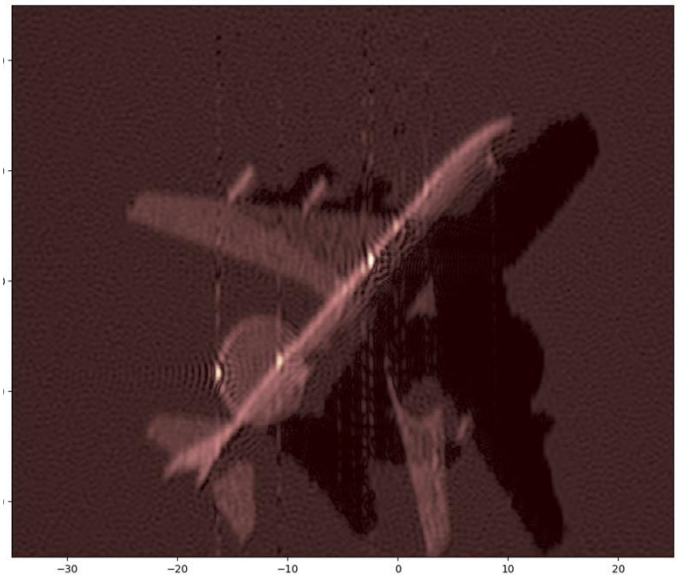
AI performance suffers from lack of training data for satellite images

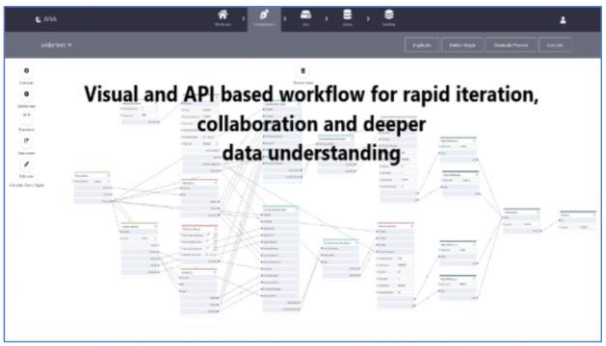
Rendered.ai is a complete Framework for cutting edge synthetic data generation workflows: Physically accurate simulation of non-visual/RGB data (RADAR – including active scanning and Synthetic Aperture Radar (SAR)).

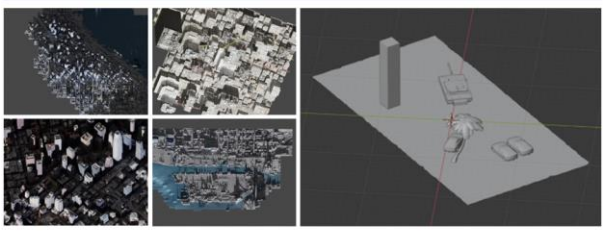
- Procedural Generation of physics-based synthetic data
- Pixel-based synthetic data accuracy
- Automatic or insight driven iterative data generation workflows with integrated model feedback
- Rapid intervention and collaborative workflow with Graphical and API-based workflows
- Exploration of rare events and edge cases
- Tools to manage data (compare/ cleanse/ relate)



Physics-based synthetic data in a **Common Application Framework** improves Satellite Imagery AI

- **Data Hygiene**: Address the cold start problem, generate data when data is not available, adjust training data for hidden biases, prevent concept drift and model decay, and accommodate data sensitivity and confidentiality requirements.
- **Accurate light transfer characteristics and fully ray traced caustics** improves realism allowing for synthetic data to be used in both AI training and test data sets.
- **Incorporation of non-visual data** including GPU-accelerated, full-wave electromagnetic simulations of RADAR and SARs to allow rapid simulations as well as meeting sensor fusion needs.
- **Data science cloud native workflow** built for collaboration, ease of use, and integration into your existing data and simulation workflows. Users can work with Rendered AI through a visual programming language or API to support diverse use cases and scalability.





What this means for **Satellite Imagery**

Quickly and Cheaply Compare/Improve Algorithmic Performance

Working in concert with your existing simulation tools and data repositories or stand-alone, this package can accelerate your AI efforts to improve labeling, fortify your AI against edge conditions, integrate new sensor modalities and easily and quickly modify your data. We integrate visual and non-visual data and improve the control of simulations by your data scientist - Quickly modify data for test and training. **Synthetic data becomes a capability - not a disposable deliverable.**

