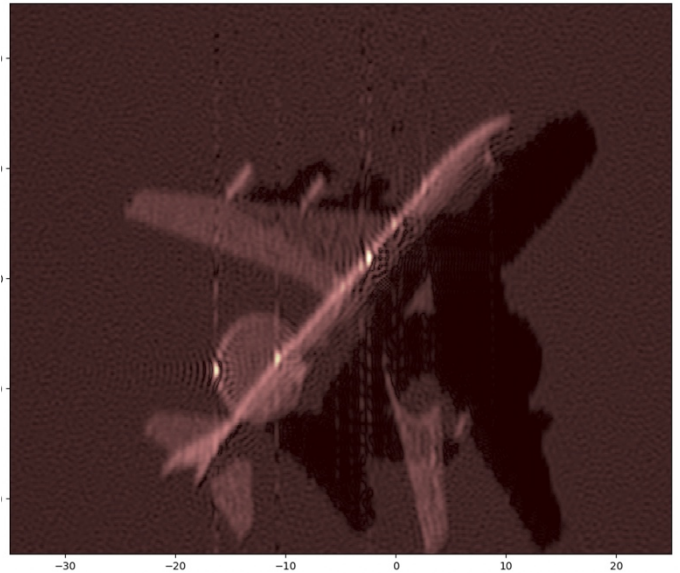




AI performance suffers from lack of training data for satellite images

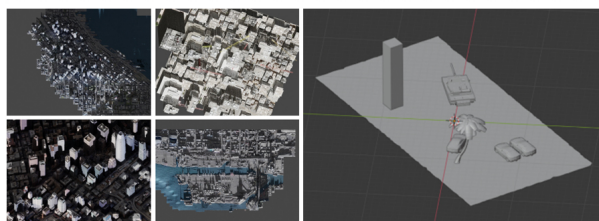
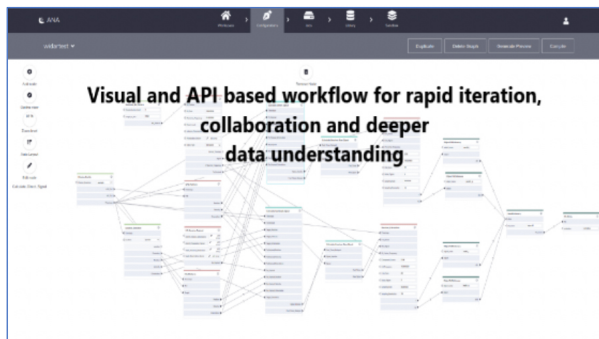
Rendered.ai is a complete toolset for cutting edge synthetic data generation workflows: Physically accurate simulation of non-visual data (RADAR – including active scanning and Synthetic Aperture Radar (SAR)).

- Tools for 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)



How physics-based synthetic data improves AI outcomes for satellite imagery

- **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

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 data types from the vehicle and highway-based sensors and measure their efficacy. We integrate visual and non-visual data and improve the control of simulations by your data scientist for more robust data insights.