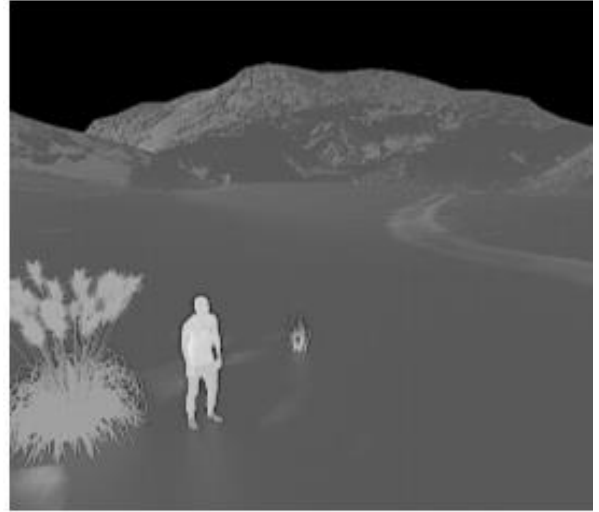


Perimeter Security Applications for Unattended/AI Supported Sentinels

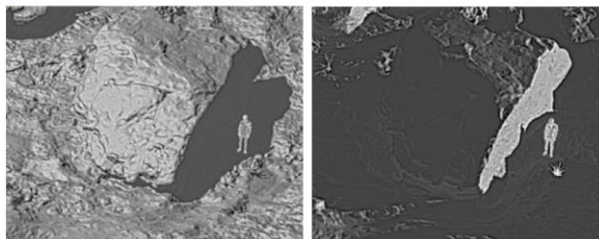
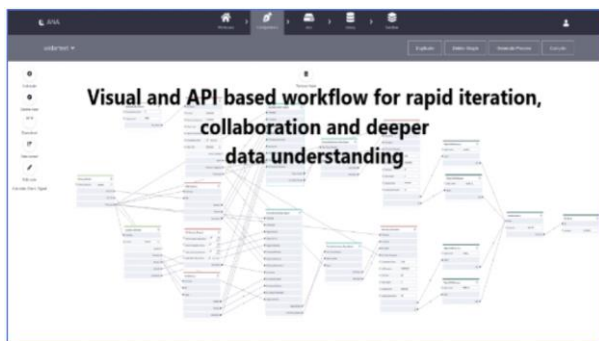
Rendered.ai is a complete Framework for cutting edge synthetic data generation workflows: Physically accurate simulation of sensor data: Infrared (SWIR, MWIR and Thermal) and visual.

- Expansive library of tools for physics based synthetic data
- Automatic or insight driven iterative data generation workflows with integrated model feedback
- Rapid intervention and collaborative workflow with Graphical and API-Based workflows
- Irradiance, Temperature, Emissivity and Transmissivity modeling
- Tools to manage data (compare/ cleanse/ relate)



Physics Based Synthetic Data in a **Common Application Framework** improves Perimeter Security 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 privacy 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.
- **Simulation of non-visual data** including full-wave electromagnetic simulations of RADAR , MWIR, SWIR and scene/object/gesture integration and temperature and noise pre and post processing.
- **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 **Perimeter Security AI**

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 data types, new scenes, new objects and new conditions, and measure their efficacy. Quickly modify data for test and training. **Synthetic data becomes a capability - not a disposable deliverable.**