

The Geospatial Metaverse

A searchable, consistent and realistic digital 3D map of the infrastructure of the entire planet



Meet the company behind the world of **Microsoft Flight Simulator**

For the first time ever, the entire planet was made available in 3D by utilizing Blackshark.ai's unique technology.



Styria, Austria
47° 12' N, 15° 21' O

Microsoft Flight Simulator powered by blackshark.ai



blackshark.ai



Made possible via a breakthrough in **GENERATIVE AI** technology

Automatically turning 2D imagery into synthetic 3D scenes.
Previous solutions either using hand modelling or photogrammetry*.
Both methods are slow and do not scale.

Footprint



Height



Roof



Materials



*Photogrammetry is aggregating pixels – there are inherent limitations and dependency on the resolution. Our Generative AI approach creates vector graphics that are resolution independent and preserve form and features at any distance or angle of view

How does the generative AI work?

Turning 2D imagery into synthetic 3D scenes



Seattle, WA
10.7233° N, 115.8265° E
blackshark.ai SYNTH3D

SOPHISTICATED GEOSPATIAL AI

AI based detection of geo-intelligence in a global context.

Footprints, vegetation, infrastructure etc.

AI GENERATIVE RECONSTRUCTION

AI based reconstruction based on detected attributes and automatic enrichment of missing attributes.

AI SYNTHETIC TEXTURING

AI based enrichment of missing information with geo-typical plausible textures.

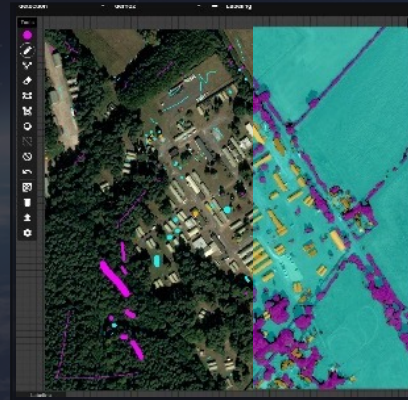
Blackshark.ai Atlas™ Platform

An AI and cloud powered end-to-end geospatial platform turning 2D input data sets into georeferenced, realistic synthetic 3D data bases and synthetic environments



Global Data

Global scale satellite, aerial, Lidar and other geospatial input data sources



No-Code ML

Efficient and easy-to-use, semi-supervised no-code data labeling and AI training tool



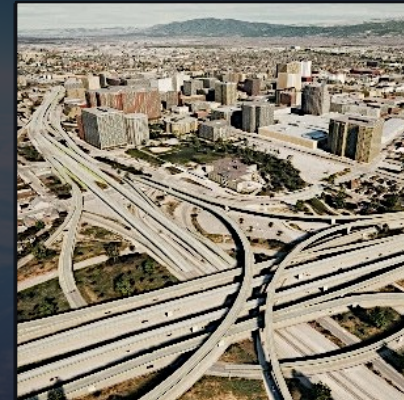
Geo Analytics

Fast and accurate A.I. powered object segmentation and features detection



3D Digital Twin

Semantic, machine-readable, 3D digital twin offering indexed data of planet surface



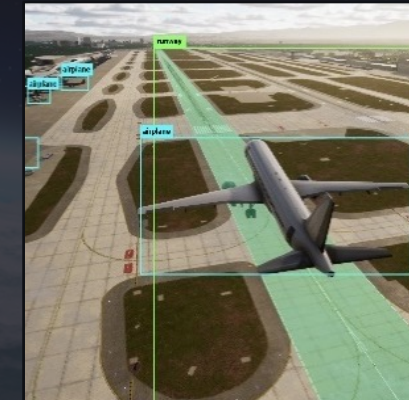
Synthetic Globe

Synthetic, photorealistic 3D simulation and training environment



Scene Generator

Rule-based variation of object placements, scene conditions, and edge cases



Synthetic Training Data

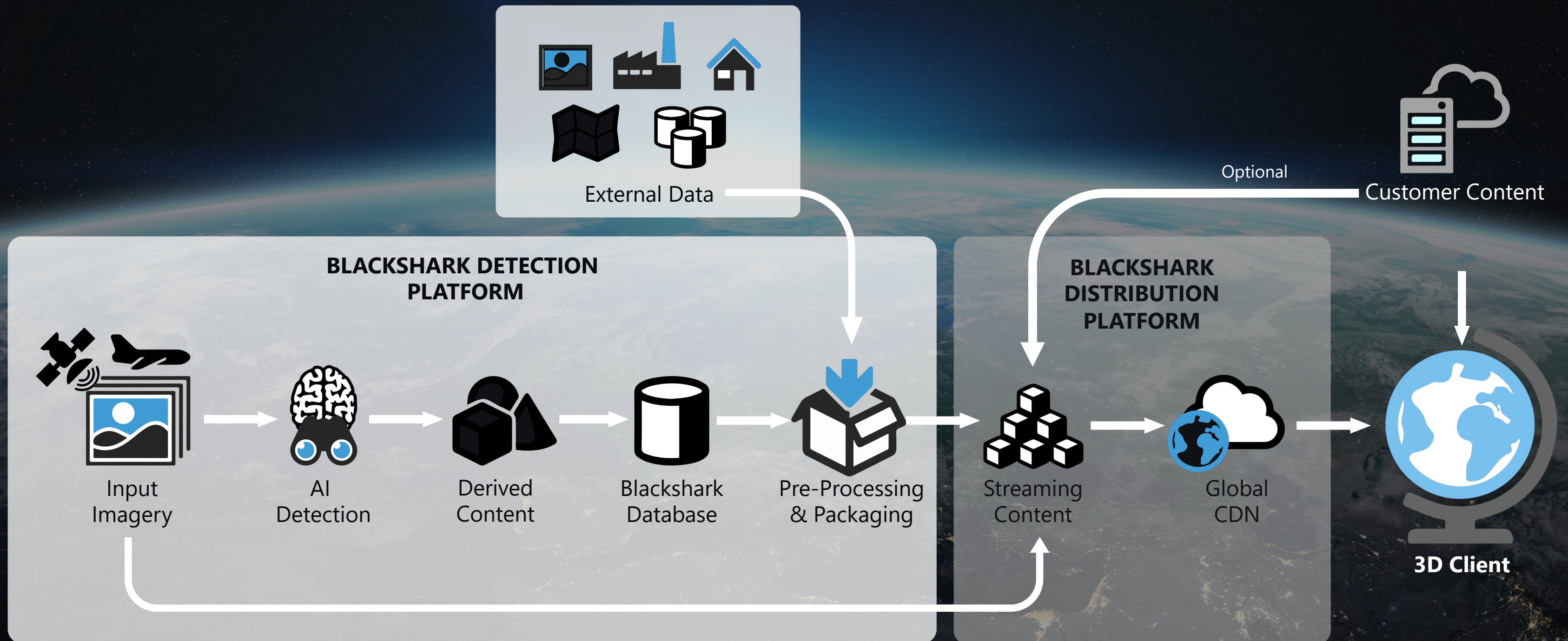
Endless variants of synthetic imagery and semantic data including labels for sensor training



blackshark.ai

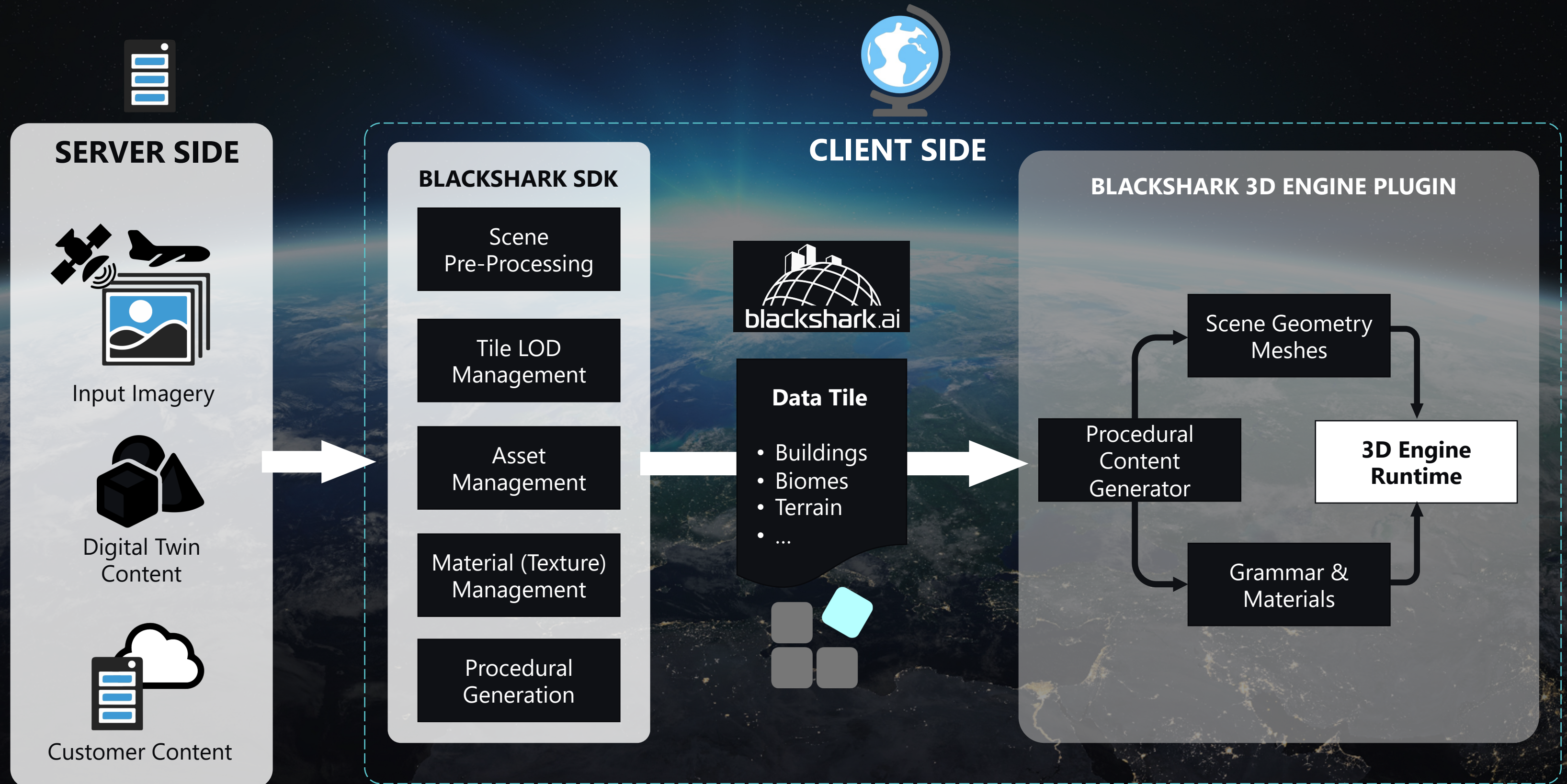
How our platform works

Extracting semantic data and transforming it into an accurate reconstruction of the earth's surface



Data Flow (Client Side)

Bird's Eye View



Synthetic Environments at Scale

Multi-domain synthetic simulation, visualization and training environments in 3D

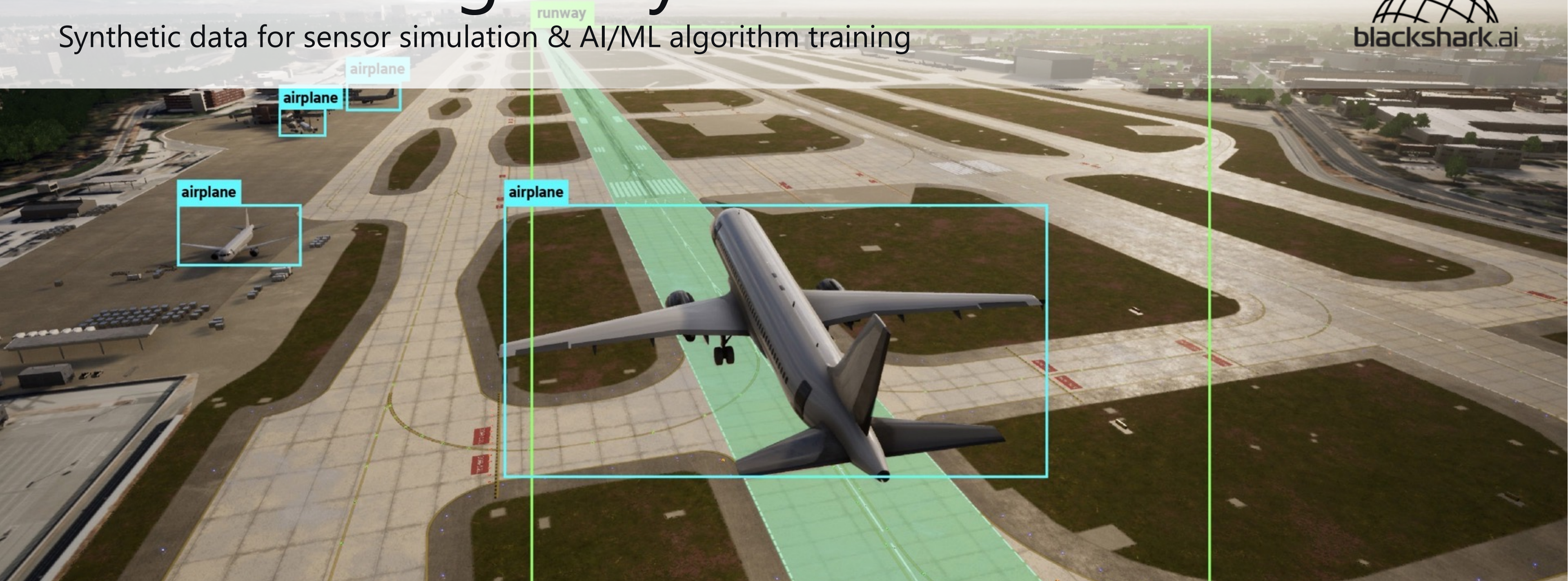


Photorealistic highly performant synthetic environment, with full semantic attribution at planet scale.

See it in action here: https://youtu.be/cxdtextf_00A

UAV Training in Synthetic Scenarios

Synthetic data for sensor simulation & AI/ML algorithm training



- Real-world aligned training scenario for any place on earth
- Automated synthetic training scenario variants
- Geo-typical, biome and rule-based asset placement
- Automatic object segmentation and COCO annotations

- Image generator pipeline offers large number of training data
- Server-side or on-premise rendering pipeline
- Semantic material classification ready for sensor simulation
- Rendered / raytraced shaders for advanced physical simulations

Let's talk!

inquiries@blackshark.ai

