



SKY ENGINE

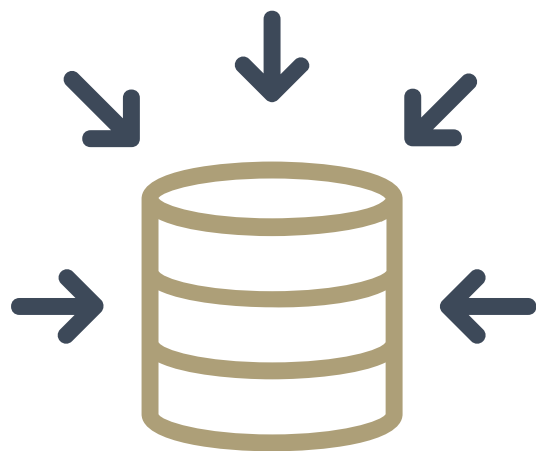
ADVANCING ARTIFICIAL INTELLIGENCE

Evolutionary AI platform for Computer Vision applications

Product presentation

Problems in AI computer vision

Sky Engine is solving all of them!



Data acquisition
is complicated
and costly



Manual labeling
is time consuming
(plus costly labor)



**Accuracy of
AI computer vision**
can be greatly improved



Do we need real data
to train computer vision models...

... when images like this are computer generated ?

FIRST PUBLIC DEMO

GPU TECHNOLOGY
CONFERENCE

Silicon Valley, March 2019



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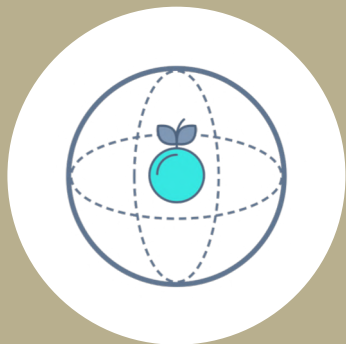
ADVANCING ARTIFICIAL INTELLIGENCE



The very first **evolutionary AI engine**
designed for **ray tracing** and **deep learning**
for **computer vision** applications

Workflow in SKY ENGINE AI platform

Allows building optimal, customised AI models for computer/machine vision from scratch



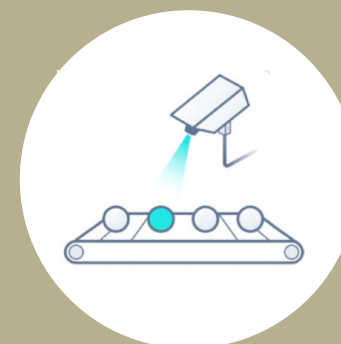
3D/4D modeling
of any objects



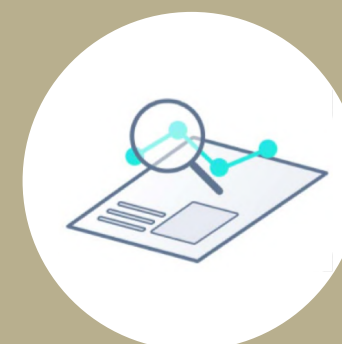
Automatic image data
generation using
rendering in any light



Evolutionary Deep Learning uses 3D/4D
data to train AI model



Computer/Machine Vision in real-time
with very high
accuracy



AI business transformation is
enabled by rapid
performance analysis

Sky Engine trains AI models for any robots

How it works - with multispectral sensors' simulation



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SKY ENGINE

creates generative 3D/4D
procedural universes,
and simulates variety of spaces.

Sky Engine trains AI models for any robots

How it works - with multispectral sensors' simulation



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SKY ENGINE
is shaping
VIRTUAL ENVIRONMENTS

Sky Engine trains AI models for any robots



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How it works - with multispectral sensors' simulation

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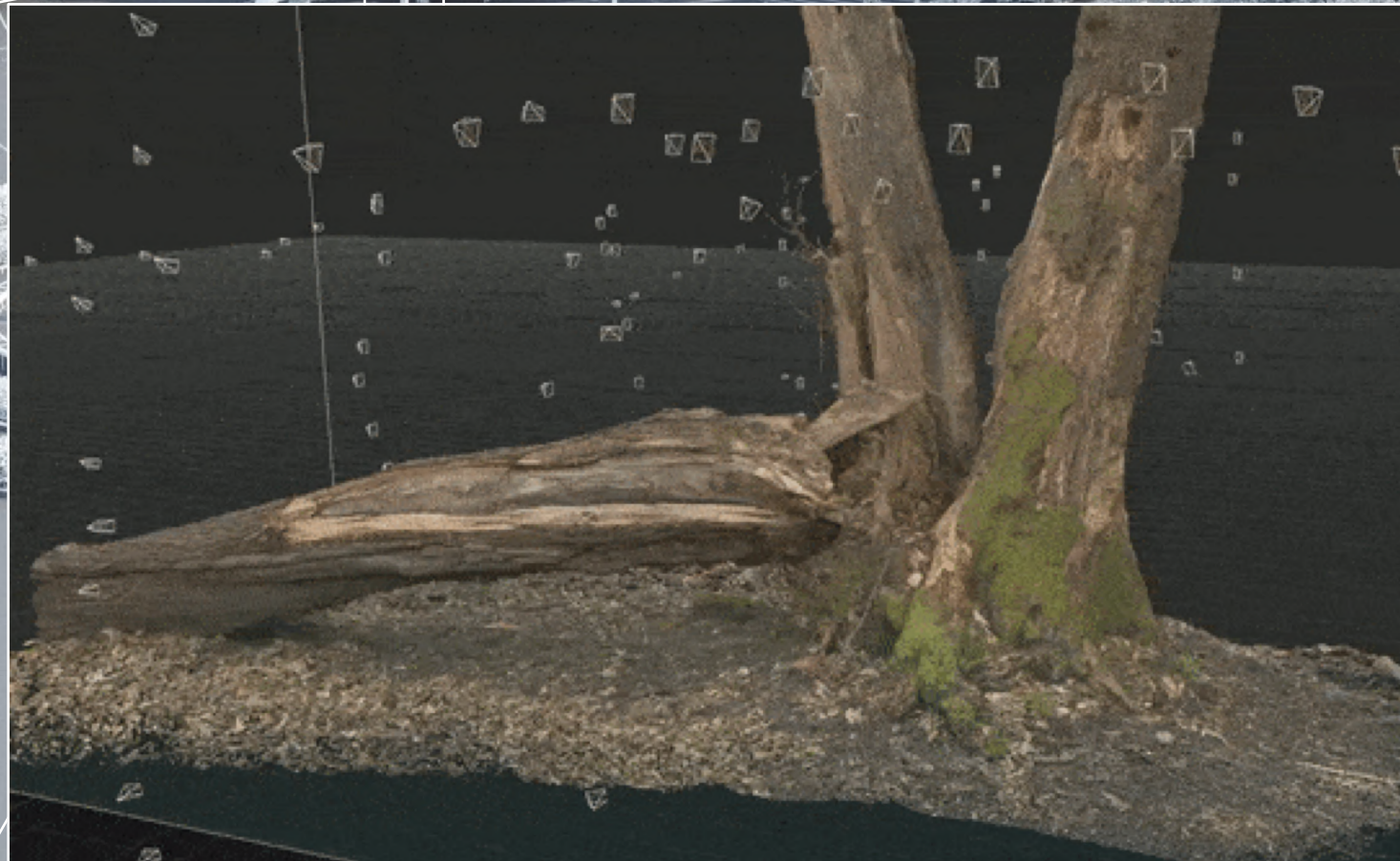
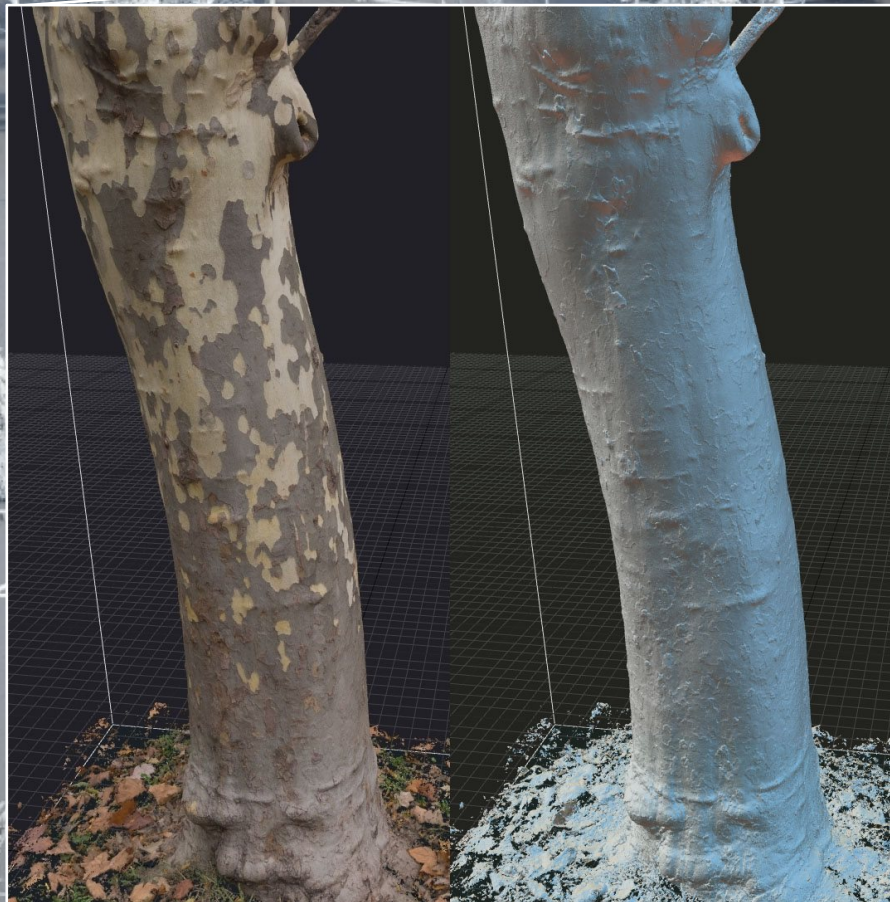
reflects any changing conditions,
weather, modifies objects
and learns new areas on the fly

Sky Engine trains AI models for any robots



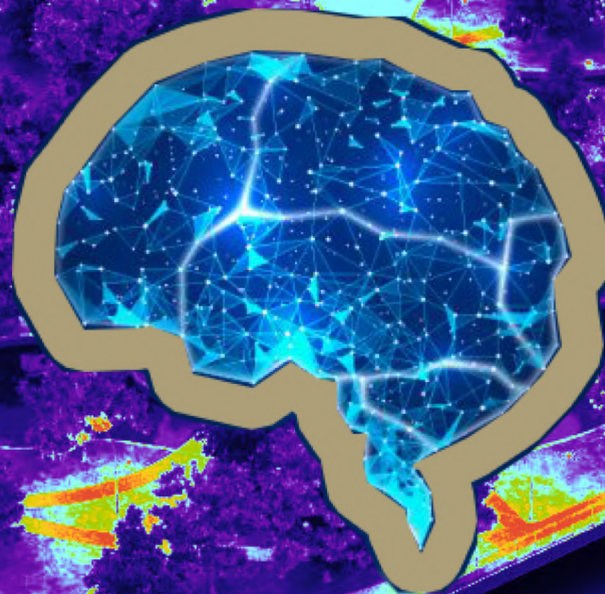
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How it works - with multispectral sensors' simulation



Sky Engine trains AI models for any robots

How it works - with multispectral sensors' simulation

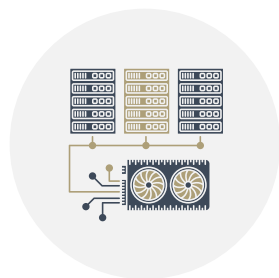


SKY ENGINE
creates **machine vision data:**

- Visible light
- Radiofrequency
- X-rays
- Infrared
- Thermal vision
- Radars, Lidars

SKY ENGINE evolutionary AI platform

Allows building optimal, customised AI models for computer/machine vision from scratch



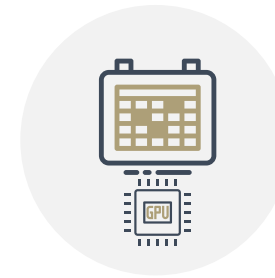
GPU ray-tracer
with sets of Physics-based
rendering shaders



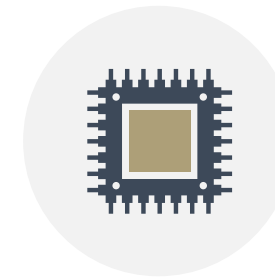
AI-based image
and video
post-processor



Garden of deep neural
network architectures
for 3D/4D training



Multi-GPU and network
level training tasks
scheduler



GPU memory level
integration with **PyTorch**
and **TensorFlow**

Deep integration of well-known technologies
for Data Scientists and Software Engineers



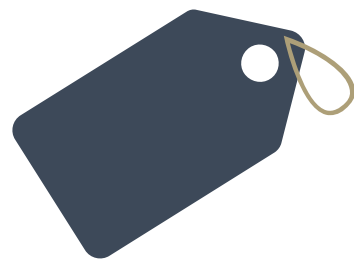
Advantages of SKY ENGINE AI platform

Allows building optimal, customised AI models for computer/machine vision from scratch



ZERO DATA ACQUISITION

Large amounts of real imaging data are no longer necessary - decrease costs.



ZERO DATA LABELING

Human-based data labeling is no longer required.



HIGHER ACCURACY OF AI MODELS

Sky Engine is advancing AI and computer vision with improved accuracy in several industries.



SAVE ON HUMAN RESOURCES

As less human interaction is required through processing automatisation.



COSTS OPTIMISATION

Leads to huge savings on operations as Deep Learning models use synthetic data.

Industries and Clients

B2B AI solutions based on Sky Engine AlaaS platform



Business case

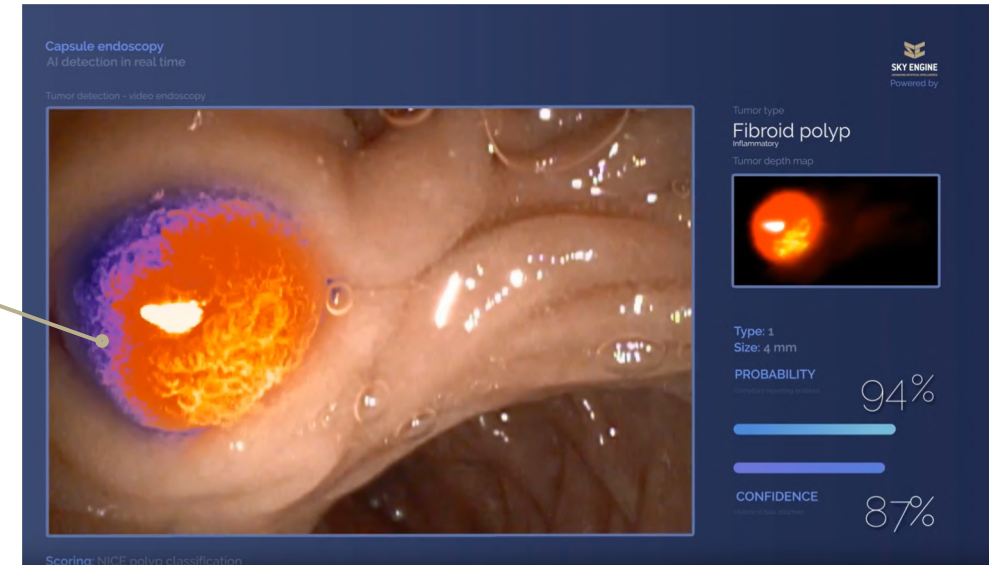
Selected use cases demonstration

Advancing cancer detection

- Improved disease detection rate
- General Practitioner is assisted and informed
- Shorter time to diagnosis
- Increased Patient throughput
- Cost savings for Patients and Customers
- Data stays with Customer
- Avoid GDPR issues



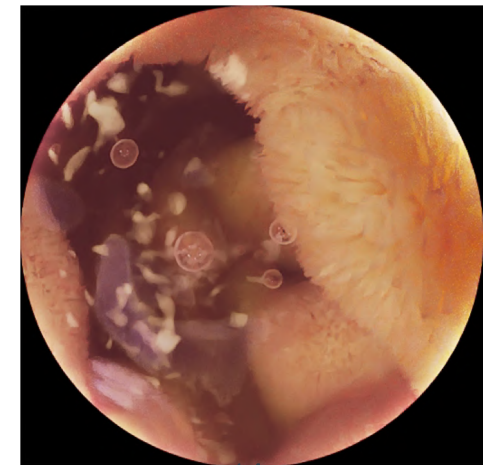
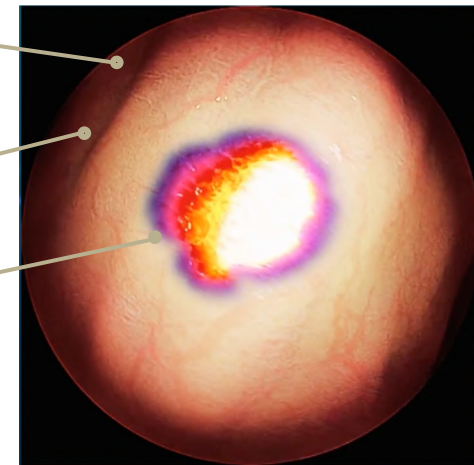
Sky Engine AI cancer detection on real-time endoscopy video



Synthetic intestines generated in Sky Engine

GI tract 4D modeling including motion

3D information is used in Deep Learning



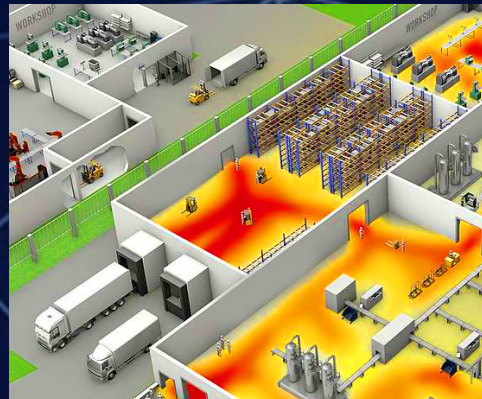
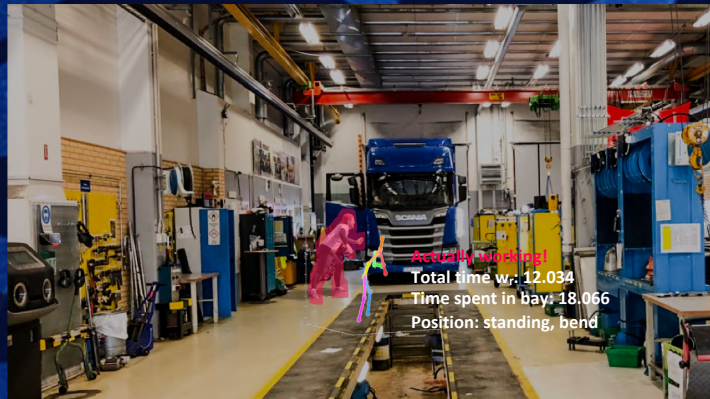


Business case

Selected use cases demonstration

AI analytics in truck workshops

- Service revenue optimization
- Vehicles working bay AI analytics
- Heatmaps and statistics
- Workers and tools tracking



Business case

Selected use cases demonstration



Self-learning robots in public spaces

- Robots guidance in public areas
- Safety of humans and robots
- Learning from the experience
- Logistics optimization
- Equipment efficiency
- Highly scalable



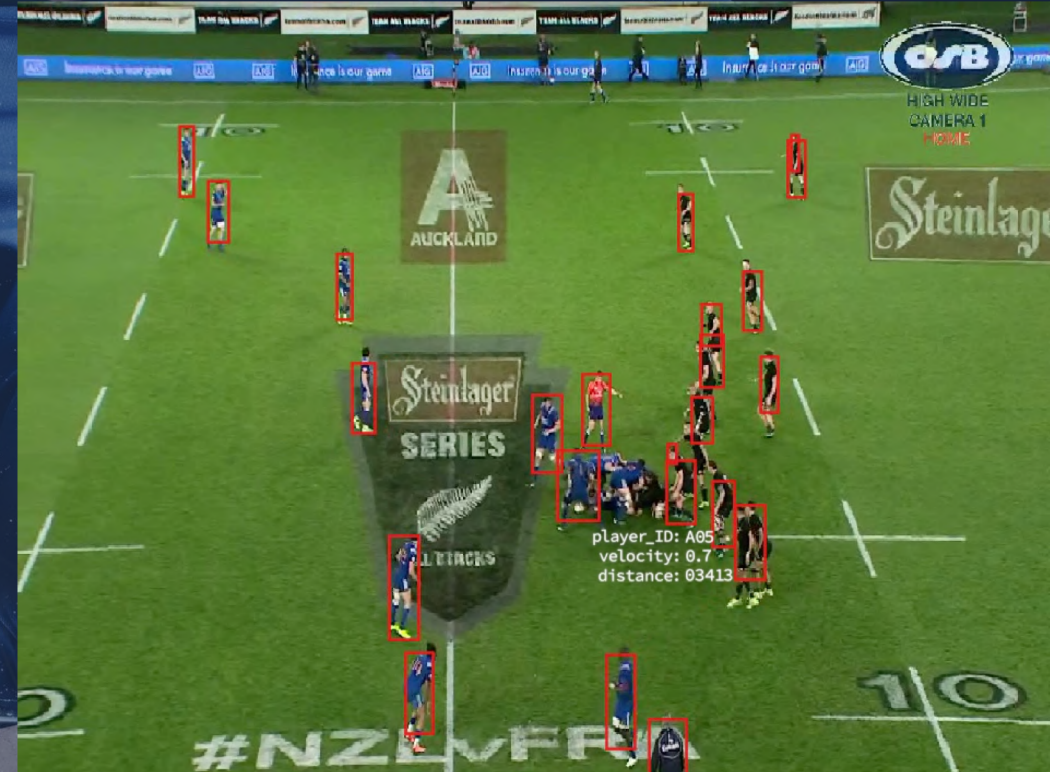
Business case

Selected use cases demonstration

Next generation live game experience

With real-time automated data collection.

Powered by **SKY ENGINE Computer Vision** and **Artificial Intelligence**.



Partnership with Adobe Allegorithmic

Signed May 2019

Adobe Substance Designer integration

Go-to-market under discussion!



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SUBSTANCE



allegorithmic



Partners





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Sky Engine offices around the globe

Meet us!

Sky Engine AI Headquarter
in London, UK

Offices:
Brussels, BE
Warsaw, PL
Shanghai, CN

contact@SkyEngine.AI
www.SkyEngine.AI

[linkedin.com/company/skyengine](https://www.linkedin.com/company/skyengine)
twitter.com/skyengineai





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San Jose, Silicon Valley, US, 22-26 March 2020

GTC GPU
TECHNOLOGY
CONFERENCE



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nVIDIA

SKY ENGINE to showcase the power of the first
evolutionary AI platform at **NVIDIA GTC 2020**

Sky Engine is the very first self-learning AI toolset for computer vision applications

THANK YOU



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www.SkyEngine.AI

