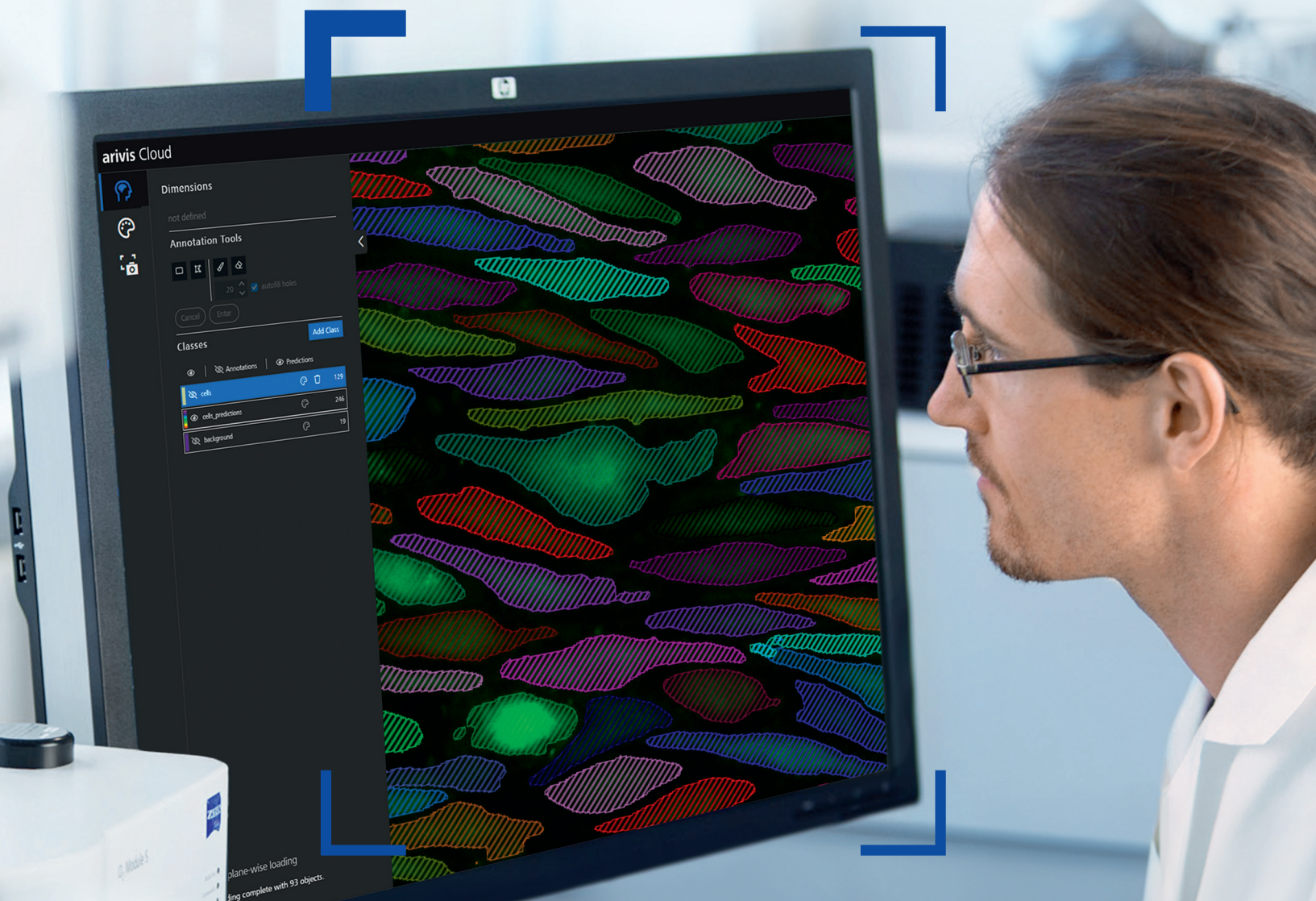


Easily Train Your Own AI Models.



ZEISS arivis Cloud

Cloud platform for training AI image segmentation models to enable automated image analysis

www.zeiss.com/arivis-cloud



Seeing beyond

Train AI Models to Boost Image Analysis.

For higher throughput, reliable, and reproducible results.

Train powerful AI models to automate image analysis

Train AI models for image segmentation on your data in the cloud, whether in the lab or on the go.

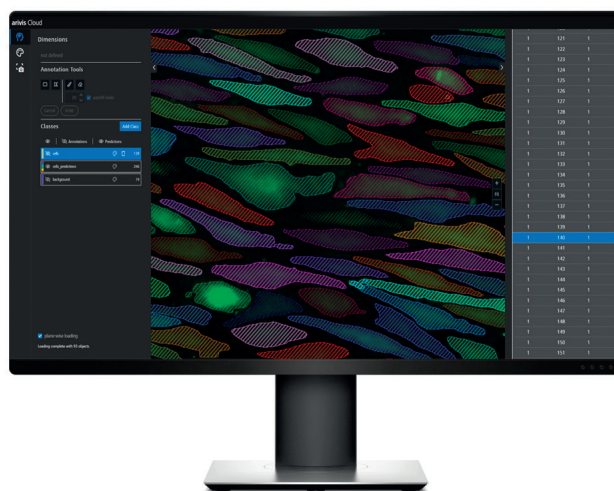
Training a model to match your specific image analysis task is easy. Simply draw a few example annotations and click "Train" to create a customized Deep Learning model.

Achieve high-quality segmentation for any structure. Even for tasks previously impossible with conventional methods, Deep Learning does the trick.

Step into a new era of AI-driven image analysis for reproducibility and throughput with AI models trained on ZEISS arivis Cloud



arivis Cloud



Making Deep Learning accessible

No need for coding or prior AI knowledge. Easily train customized AI models on ZEISS arivis Cloud

Intuitive user interface

Supports novice users and experts in all steps of training a Deep Learning model. All you need to know is what structures you want to detect in your images.

Annotate quickly with ease

Use the AI-assisted annotation tool to quickly get objects annotated. Only annotate enough to get the model off the ground, review the results, and tweak only when needed. Let AI do the rest.

Cutting-edge software

The cloud-based solution is always up to date, featuring the latest AI algorithms. No more manual downloads or installations required.

Rapid results

Accelerate time-to-market by automating routine and repeatable AI tasks with the power of Deep Learning models.

Train Powerful Deep Learning Models to Match Your Task

- Semantic (pixel-based) segmentation models to identify the area covered by your structures of interest.
- Instance (object-based) segmentation models to identify and outline objects individually even when they are touching.

Work together

Collaborate with your colleagues and peers to refine and expand shared models and training datasets, for increased model robustness, and reproducible results.

Integration and scalability

AI models trained on arivis Cloud can be used directly in the cloud or integrated into pipelines in ZEISS arivis Pro or ZEN and ZEN core. Scale up your analysis with ZEISS arivis Hub.

Analyze images from any system or manufacturer

- Confocal Microscopy
- Widefield Microscopy
- Lightsheet Microscopy
- Electron Microscopy
- Computer Tomography/MRT
- X-ray Microscopy
- Multiphoton Microscopy

And more.

Vendor-agnostic image analysis; no matter the source, no matter the image format.

Train Deep Learning models for various applications

- Cell Biology
- Developmental Biology
- Cancer Research
- Neuroscience
- Immunology
- Translational Research
- Physiology
- Material Science
- Geology
- Electronics

And many other fields.

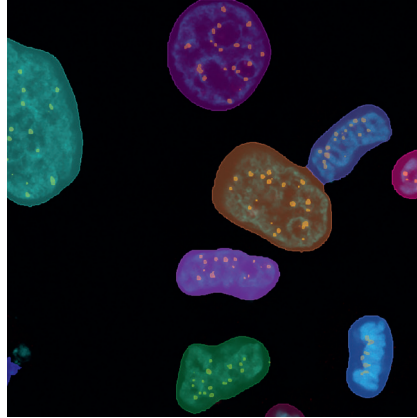
Free Up Your Time.

Let Deep Learning models do the heavy lifting.



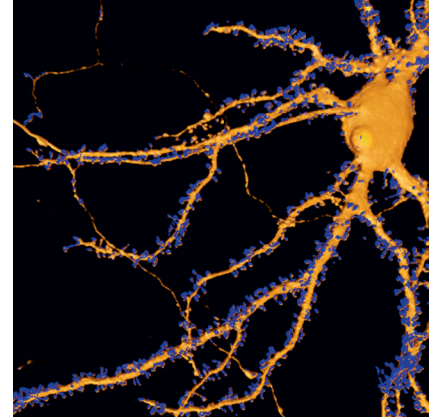
Cell Tracking

Accurately segment individual cells with instance (object-based) segmentation to track movement with high fidelity. Improved cell segmentation accuracy with AI opens doors for further downstream analysis, not possible with traditional segmentation methods.



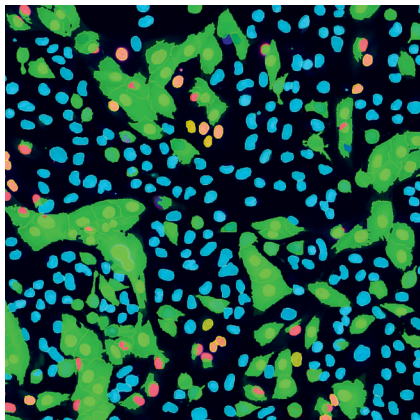
DNA Foci Assay

Segment foci and nuclei separately in 3D with either pre-trained or customized AI models. Once accurately segmented, use ZEISS arivis Pro to define and quantify relationships for comparison across diverse genetic backgrounds, drug treatments, or other conditions.



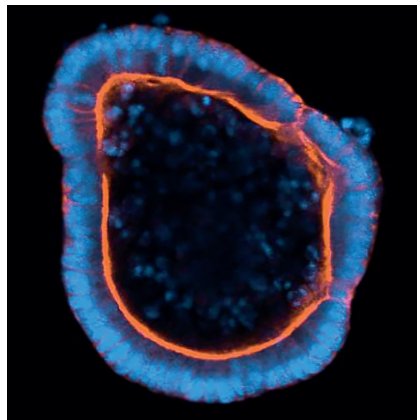
Neural Circuit Study

Leverage semantic (pixel-based) Deep Learning models for segmentation of neuronal projections and dendritic spines in 3D. Downstream quantification allows for an understanding of neural circuit biology in health and disease.



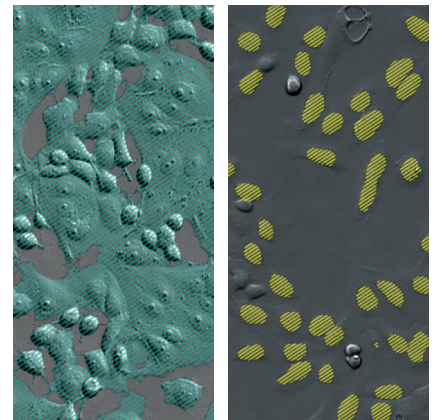
Phenotypic Screening

Easily monitor changes in cell phenotypes across various drug treatment conditions at single-cell and well-plate level. The use of AI in the processing workflow ensures reproducible and reliable results across your full screening experiment.



Organoid Volume Quantification

Analyze your organoids for changes in cell layer formation and single-cell effects with AI. Reliable segmentation allows for improved downstream quantification of how organoid growth and differentiation are affected in toxicity assays, drug screens, and disease models.



Cell Confluency

Cell or nuclei counting

Quantify the area covered by cells, and count cells or nuclei easily with AI. Apply the model to time series and/or multi-well plate data.

Did you find these examples inspiring, but perhaps not a perfect fit to your needs?

ZEISS arivis Cloud can do a lot more. The software is available for academia and industry with various subscriptions.

Contact us, our team would love to help you find a solution.



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