webKnossos: Share, Annotate and Proof-Read your Large-Scale 3D Images Online

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webKnossos is an open-source data sharing and annotation platform for large-scale 2D and 3D image datasets. Increasingly large image datasets are required for discovery in life sciences. webKnossos makes it easy to work with them.

Core features of webKnossos are fast 3D data streaming, uniquely fast skeleton annotation, and efficient volume annotation. webKnossos facilitates image analysis workflows on multi-terabyte datasets, including visualization of raw and multi-modal microscopy data, distributed training data generation, proof-reading of automatic segmentation, and mesh rendering of reconstructed objects.

As a scientific resource, webknossos.org serves as a database for published image datasets including their annotations.

Published in Nature Methods
(Boergens et al. 2017)

Developed by scalable minds and Max-Planck-Institute for Brain Research

Used by

@webknossos

Share and annotate large 3D CLEM images online

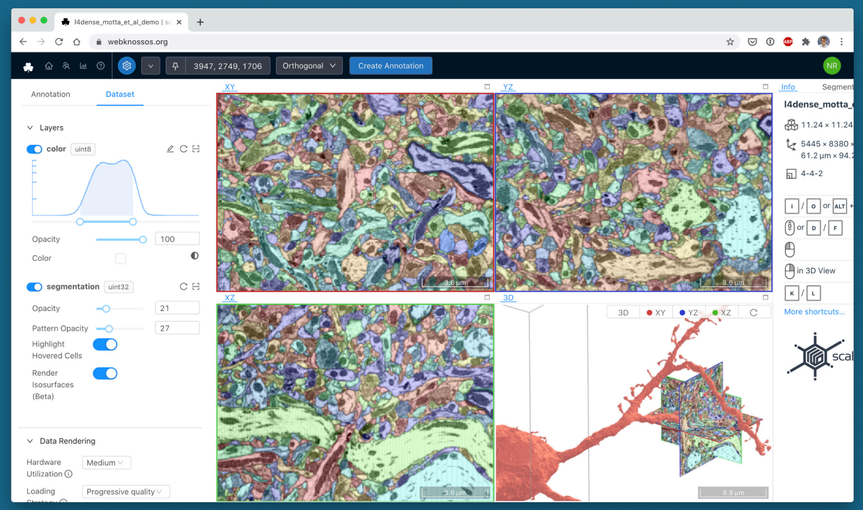
webKnossos

The best way to bring imaging, biology and data science together.

Get started within 5min. No need to install any programs.

Trace and quantify neurons with uniquely fast skeleton annotations.

Publish your data to the scientific community once you are ready.



Access your data from anywhere – fast.

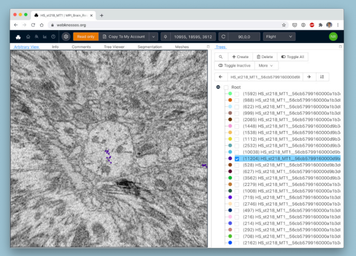
Create training data or manually segment objects with volume annotations.

Built for Life Sciences. Optimized for Neurobiology.

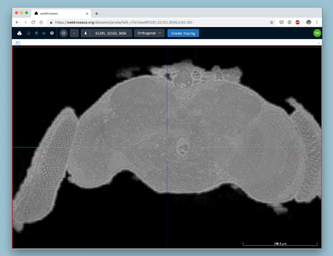
Get started on **webknossos.org**

Check out the publication gallery and create a free account to work with your data.

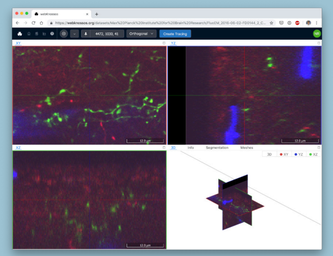
Become a pilot user to help us integrate automatic AI segmentations into webKnossos.



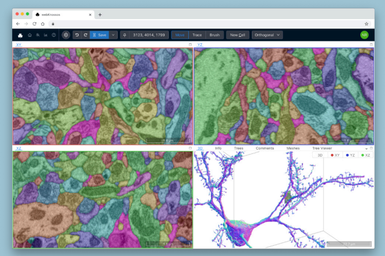
Race through your dataset with the unique “Flight mode”.
Precisely trace axons at 1.5 ± 0.6 mm/h and dendrites at 2.1 ± 0.9 mm/h.



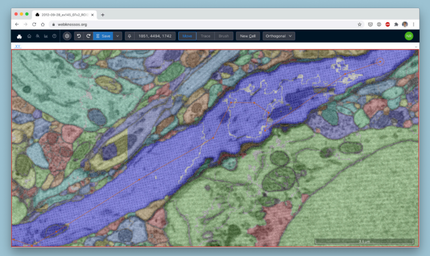
Visualize datasets from several giga-bytes to peta-bytes.



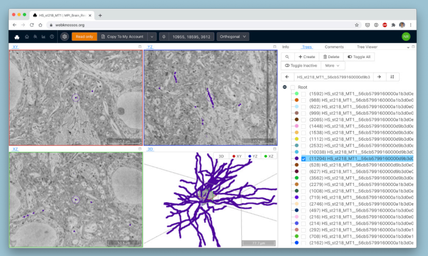
Visualize electron and light microscopy, CT and, MRI images.



Create meshes from automatic or manual segmentations.



Proof-read automated segmentations. Works best with over-segmentations.



Collaboratively create massive skeleton annotations with millions of nodes.