

# deepImageJ

A user-friendly environment to run deep Learning  
models in ImageJ

[deepimagej.github.io](https://deepimagej.github.io)

uc3m

EPFL

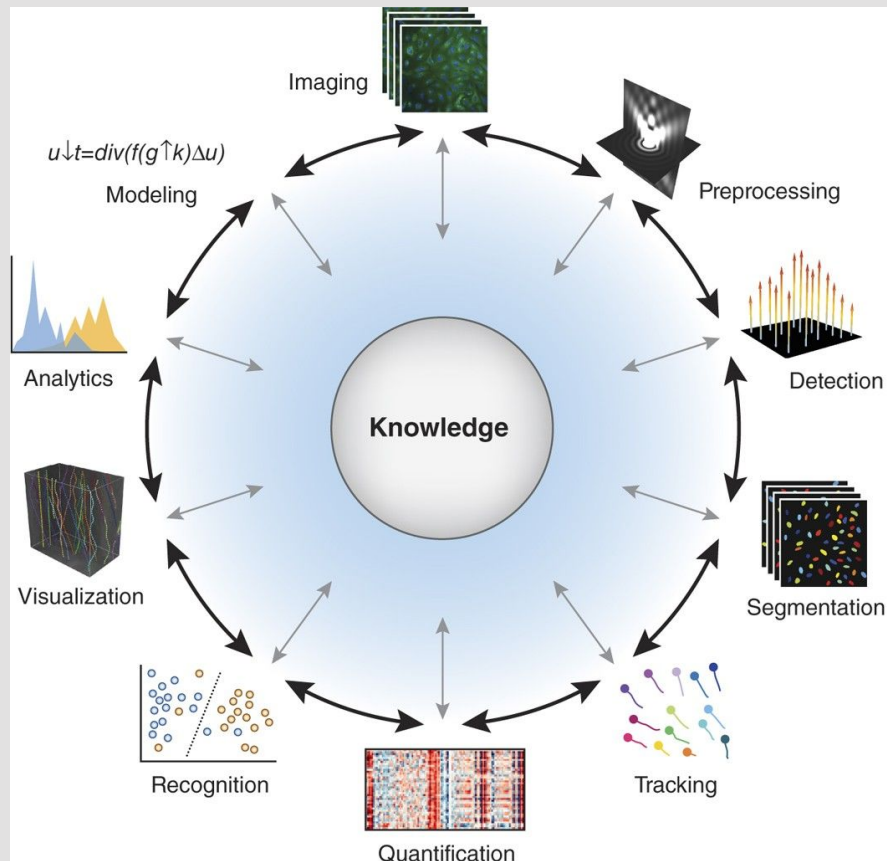
# Caterina Fuster-Barceló

[cfusterbarcelo.github.io](https://cfusterbarcelo.github.io)

- **What is deepImageJ?**
- **What is the BioImage Model Zoo?**
- **Hands on**

Slides and material is available here:

[github.com/deepimagej/Workshop-materials](https://github.com/deepimagej/Workshop-materials)



# deepImageJ: A user-friendly environment to run deep learning models in ImageJ

E. Gómez-de-Mariscal, C. García-López-de-Haro, W. Ouyang, L. Donati, E. Lundberg, M. Unser, A. Muñoz-Barrutia, D. Sage



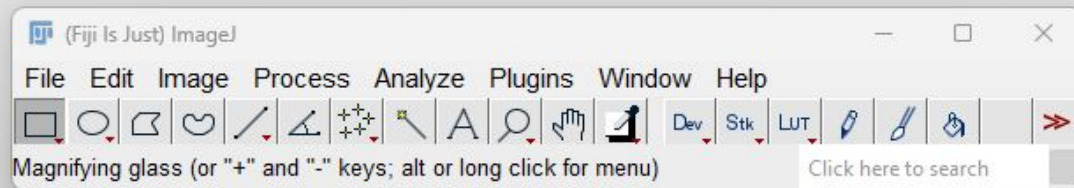


User friendly

Open Source

Widely used among life scientists

Fully equipped for scientific image **visualization** and **quantification**



# A Fiji plugin for Deep Learning with zero-code experience



## Easy-to-use

**Macro** Recordable

Unifying interface for  
Tensorflow-Pytorch  
models

## Ready out-of-the-box

**One-click** installation

Runs on  
laptop/CPU/GPU

Existing repository of  
models

## Accessible models

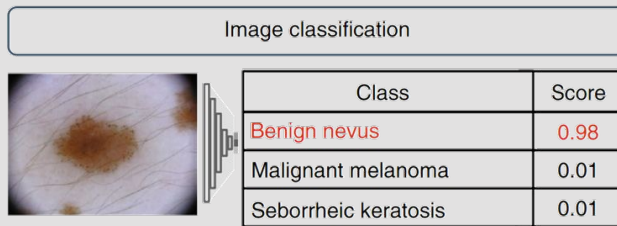
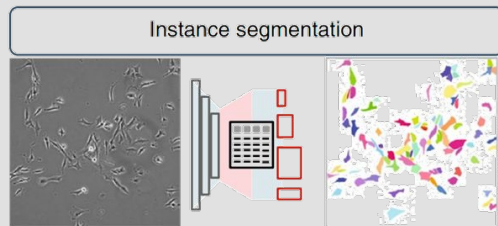
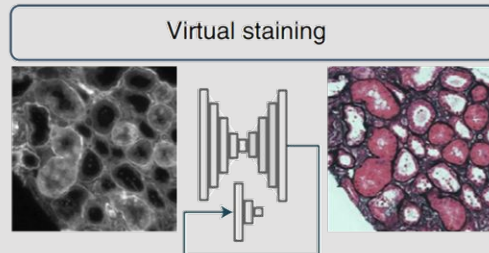
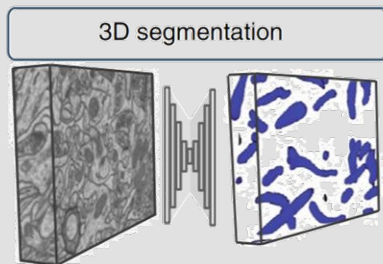
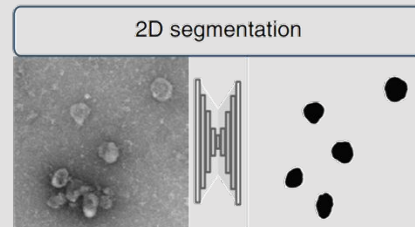
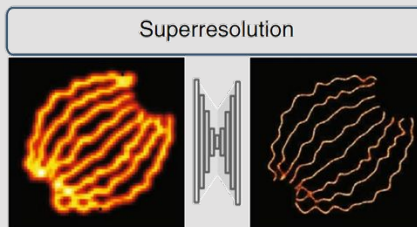
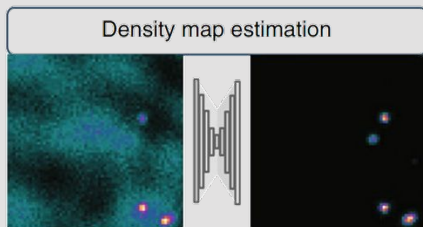
Easy **model sharing**

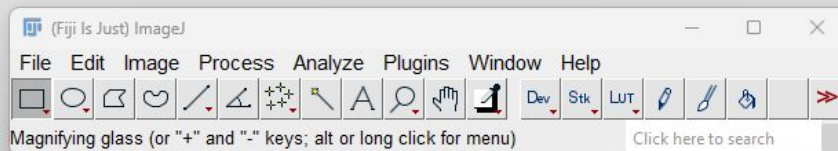
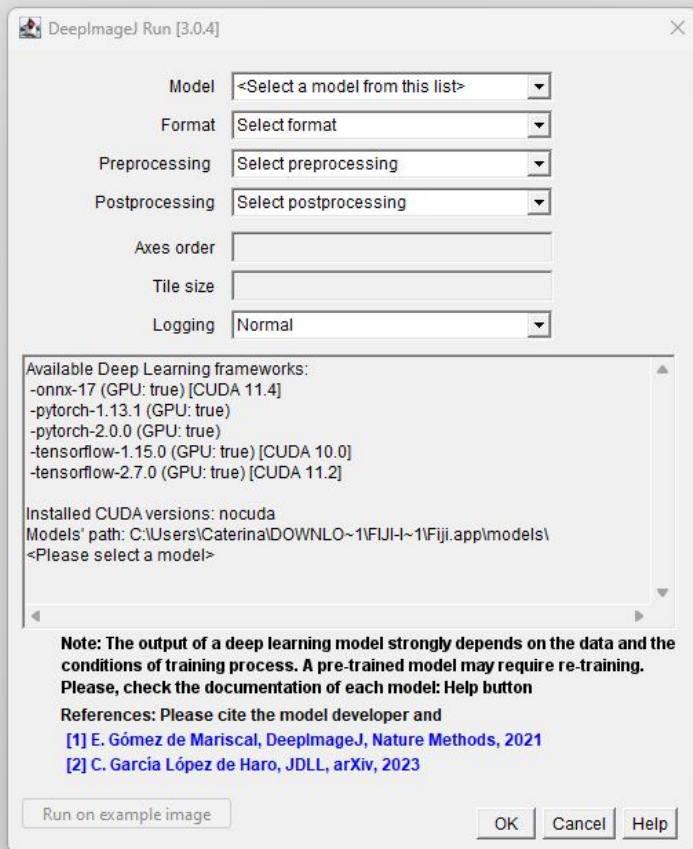
Ready to use models

GUI to build the  
bundled model



# Bioimage analysis tasks with deepImageJ





# BioImage Model Zoo: A Community-Driven Resource for Accessible Deep Learning in BioImage Analysis



2D UNet Arabidopsis Ovules

2D Unet trained on confocal images of Arabidopsis Ovules

cell-segmentation plantseg unet 2d ...

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LiveCellSegmentationBound...

Cell segmentation for phase-contrast microscopy.

2d transmission-light-microscopy label-free cells ...

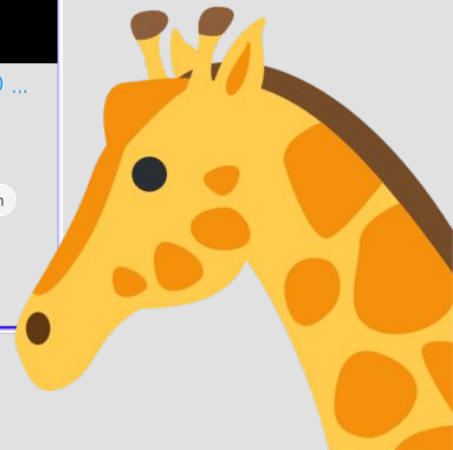
downloads 2696 license CC-BY-4.0

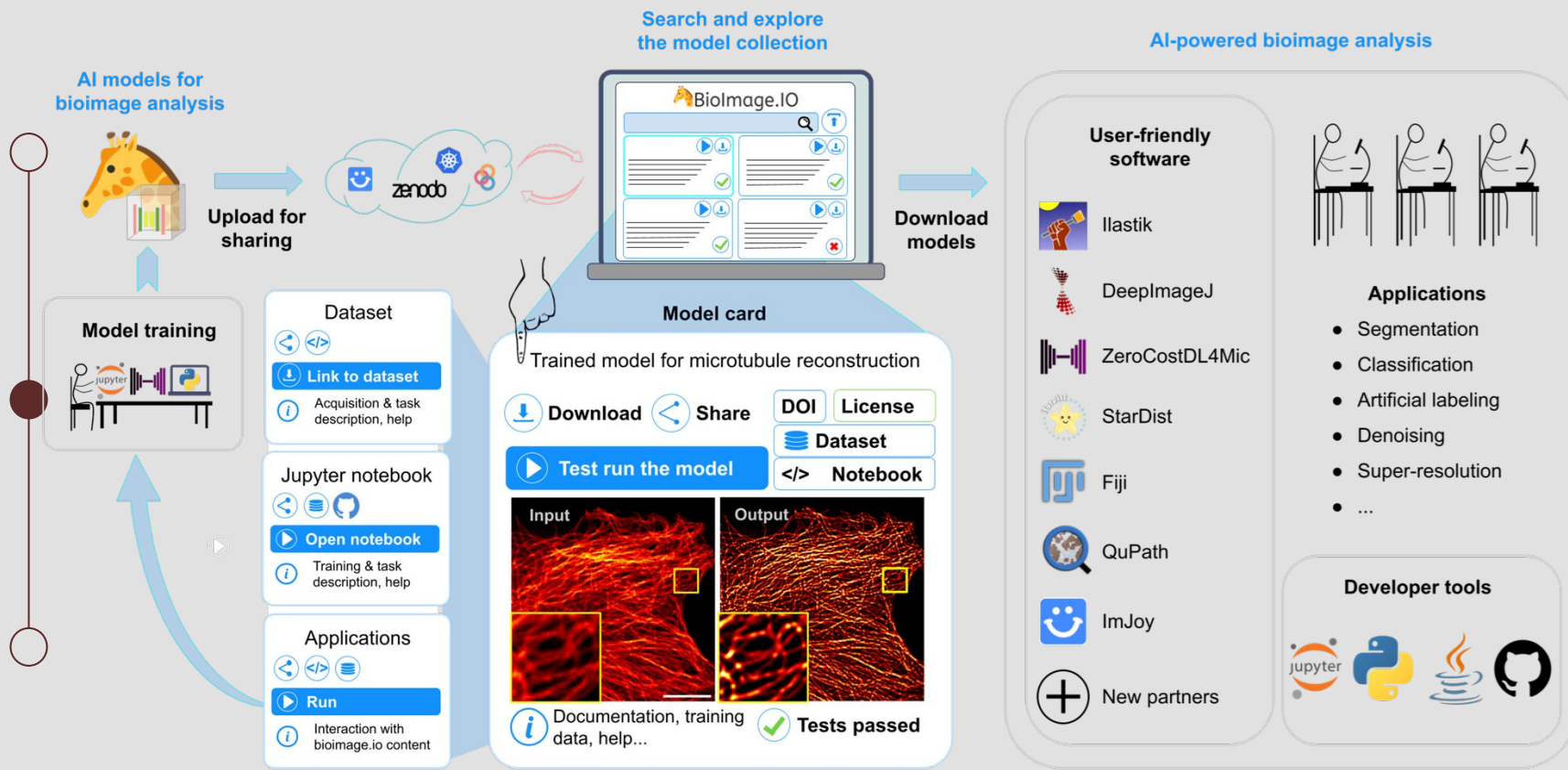
Neuron Segmentation in 2D ...

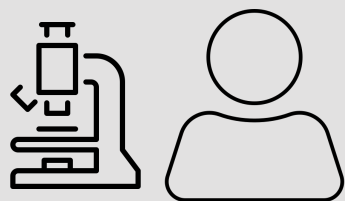
2D UNet trained using ZeroCostDL4Mic notebooks on data from ISBI...

zerocostdl4mic deepimagej segmentation electron-microscopy ...

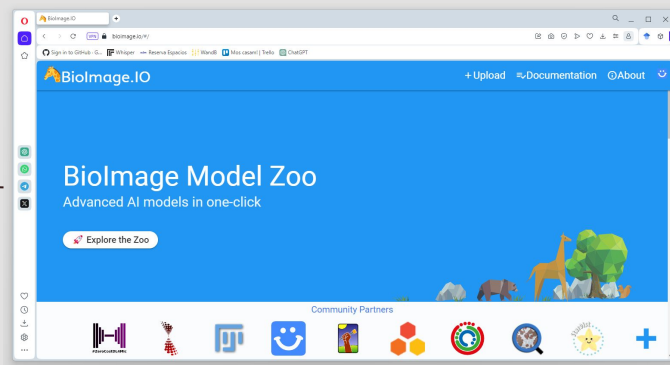
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has data  
wants a model












has a model








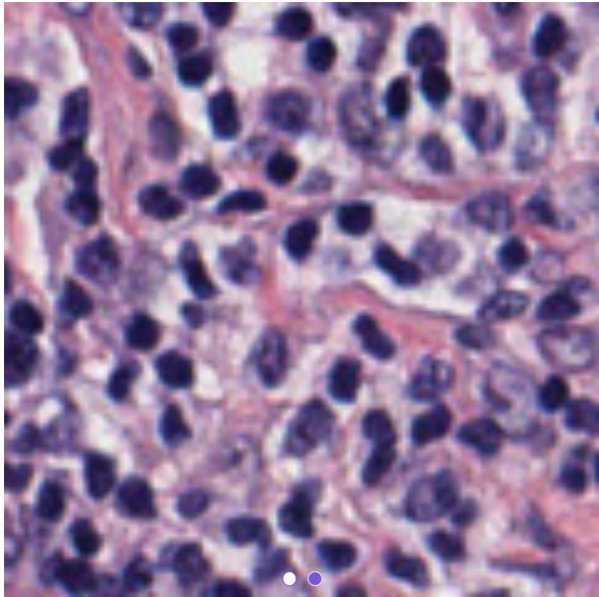
X + StarDist H&E Nuclei Segmentation



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ID 10.5281/zenodo.6338614 

 chatty-frog 



Contributors: Uwe Schmidt Martin Weigert

Hands on!



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