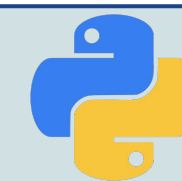


Images (2D/3D): FISH, GFP, DAPI, Hoechst, CellMask...



Big-FISH

Preprocessing

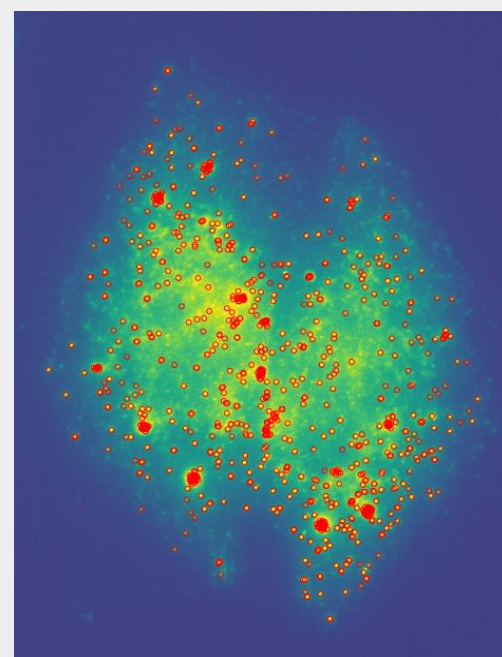
RNA detection

Spot detection

*Automatic
thresholding*

*Dense region
decomposition*

Foci detection



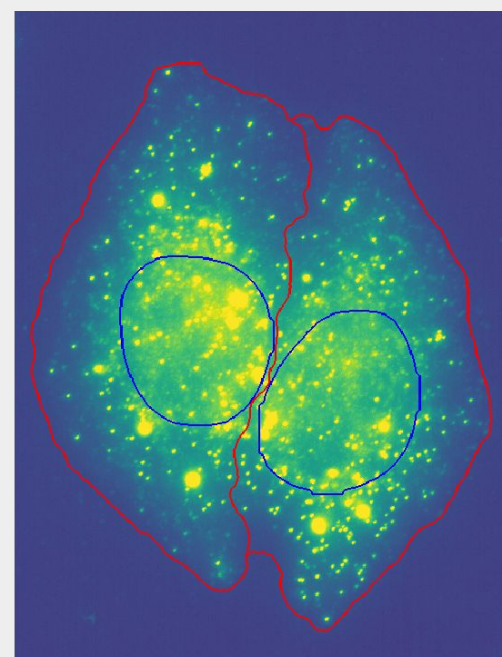
Segmentation

Nucleus segmentation

Cell segmentation

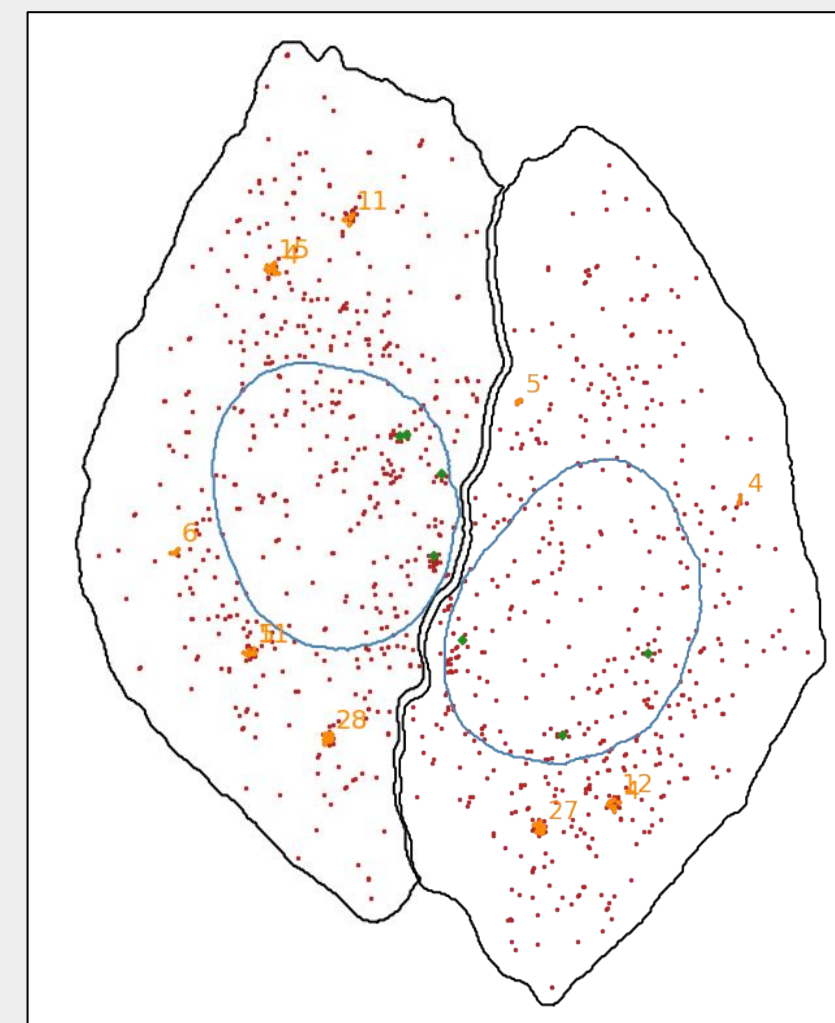
Watershed model

Deep learning model



Matching

*Spot colocalization
Nucleus - cell matching
Spot assignment*



Visualisation

*Detection plot
Segmentation plot
Individual cell plot*

Result for export

*Spots coordinates (csv, npy)
Instance masks (png, jpg, npy)
Individual cell features (csv, npy)*

Feature extraction

*Gene expression
Spatial features
Cell morphology*