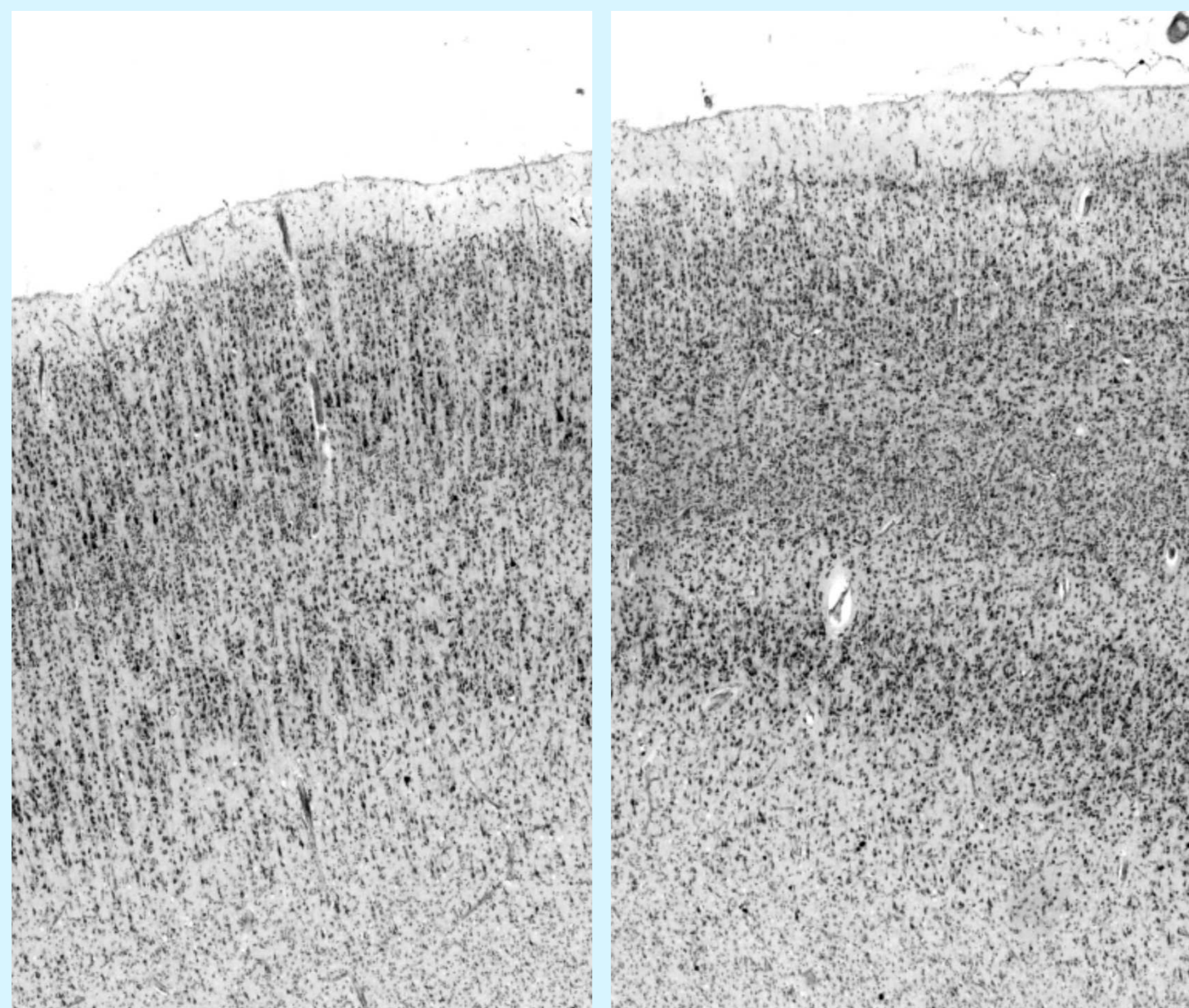


Deep Learning and Unsupervised Clustering for Analysis of Cellular Structures in the Human Brain

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Brodman Area 18

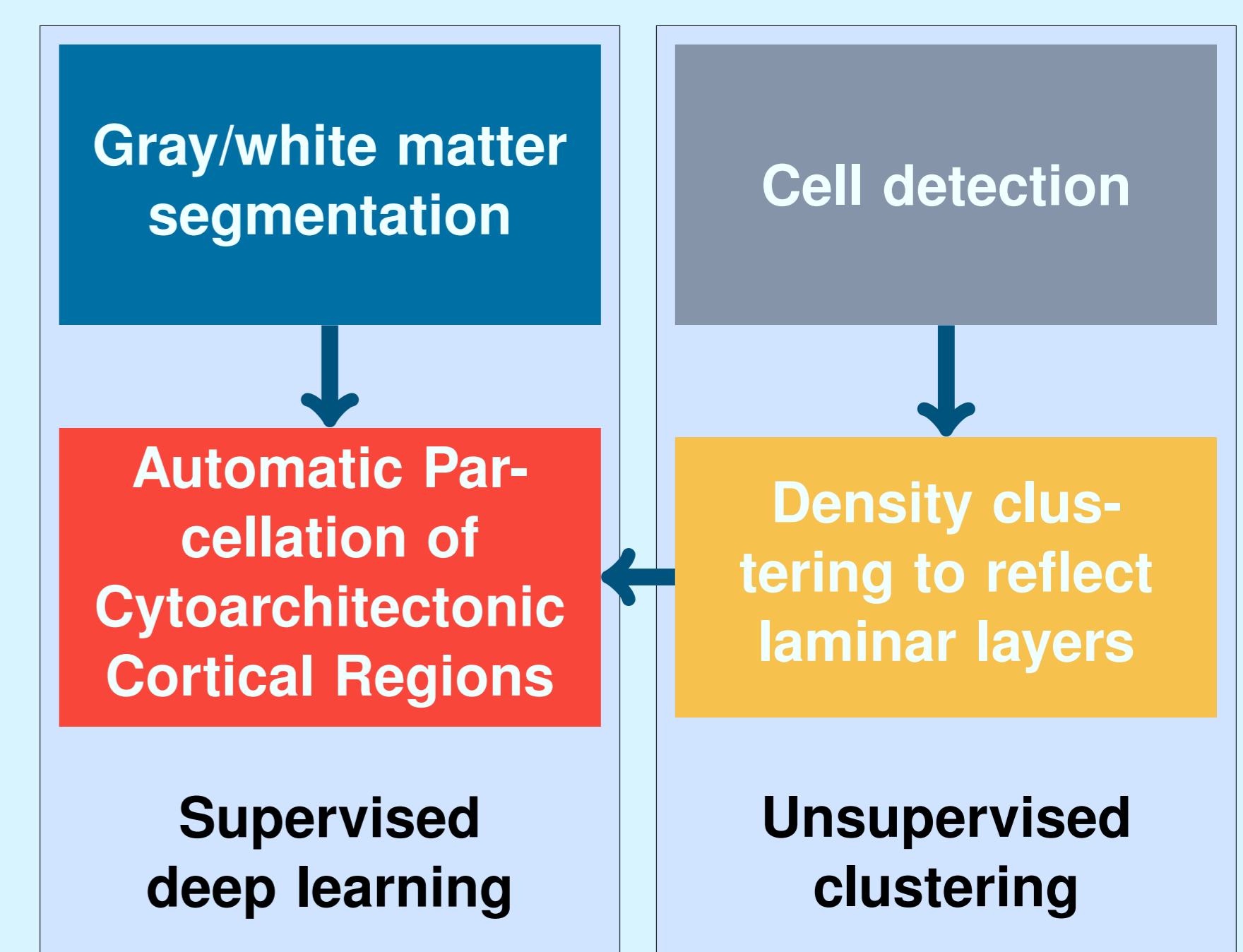
Brodman Area 17

Cytoarchitectonic Mapping

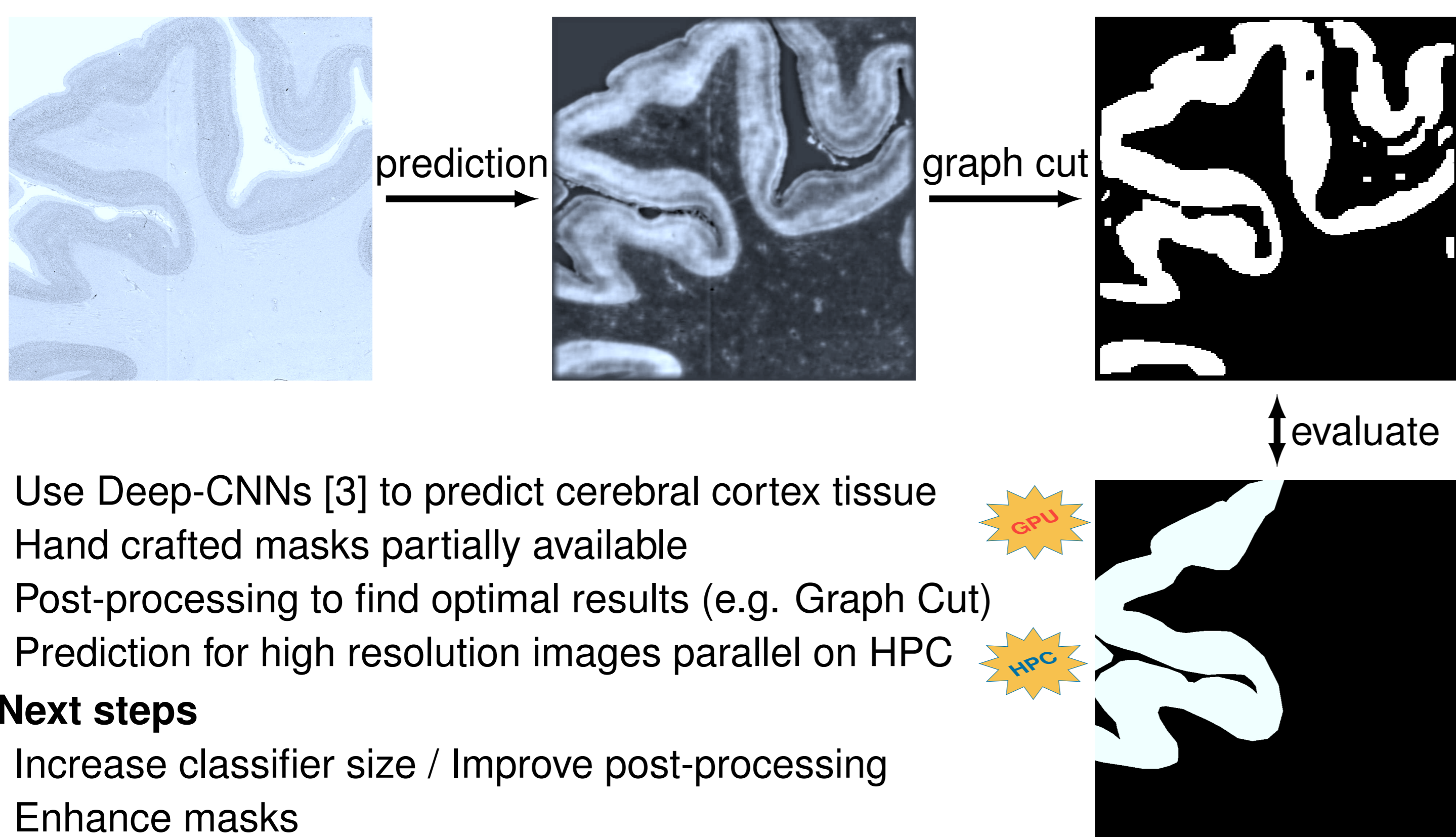
Layer structure differs between cytoarchitectonic areas [5]. Classical methods to locate borders include image segmentation, mathematical morphology, and correlation of local intensity profiles.

Goals:

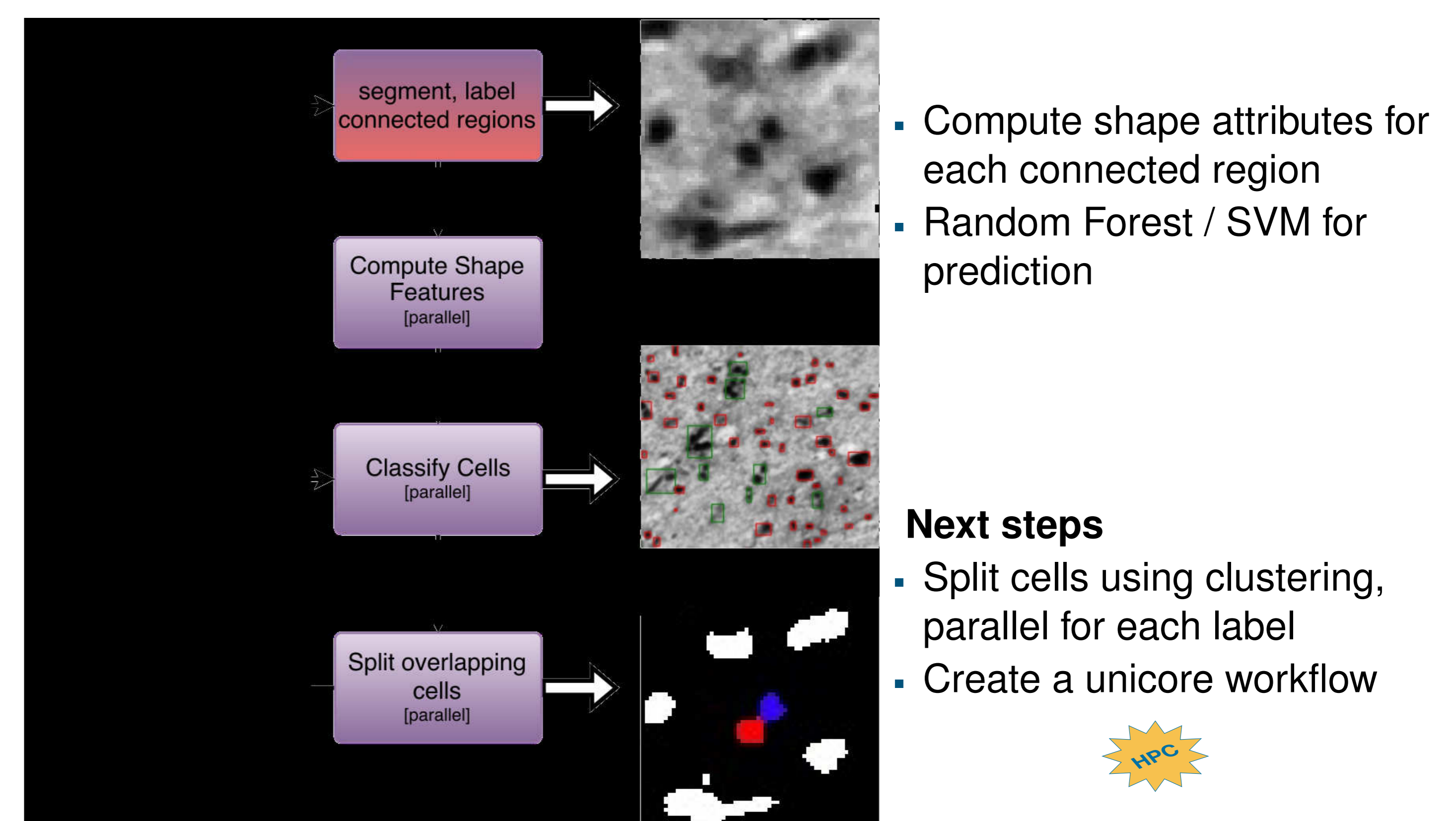
- Investigate the potential of modern **machine learning techniques** to support the analysis
- Increase degree of automatization (towards **high throughput processing**)
- Find qualitative and quantitative measures for cellular distributions



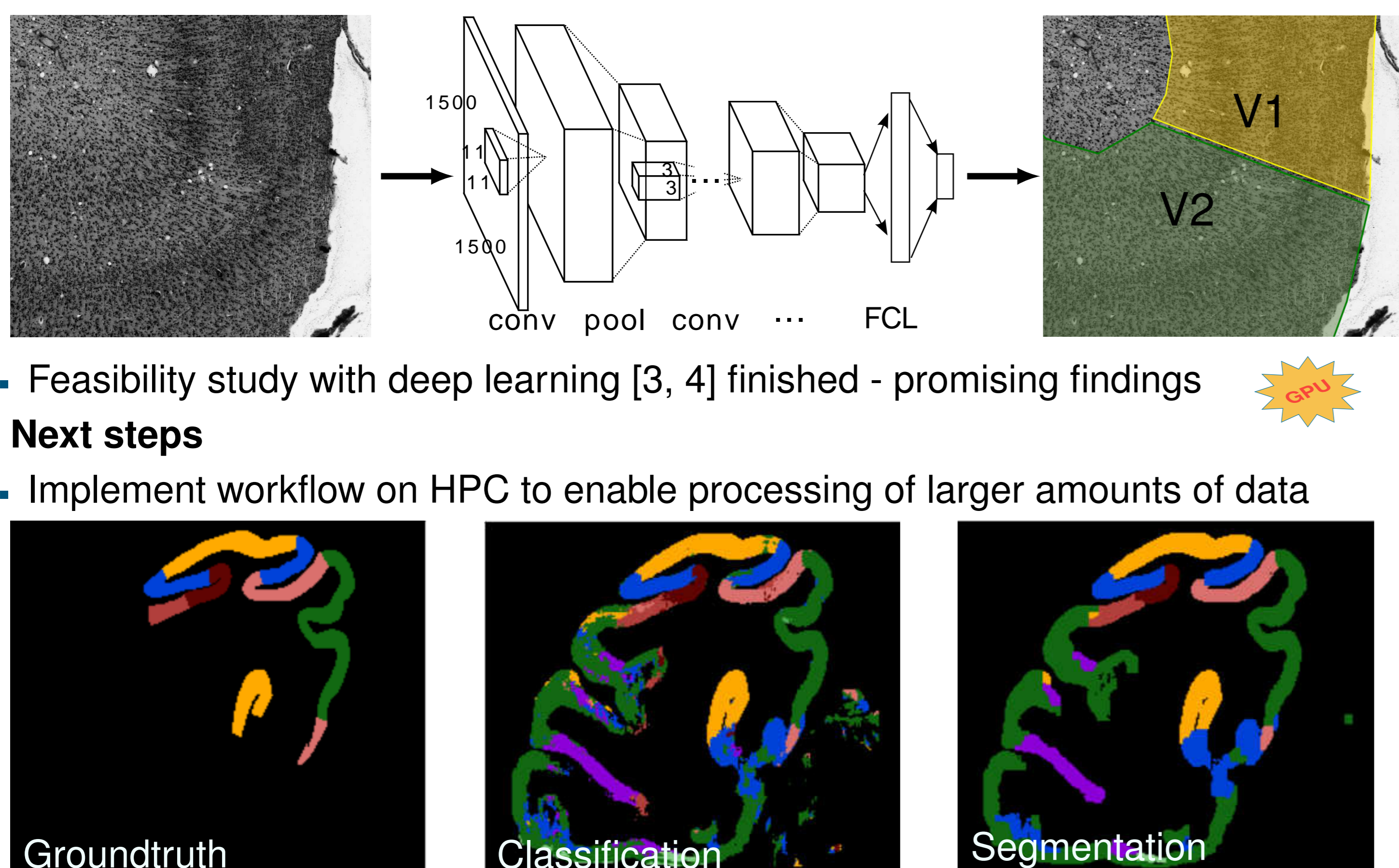
Gray/white matter segmentation



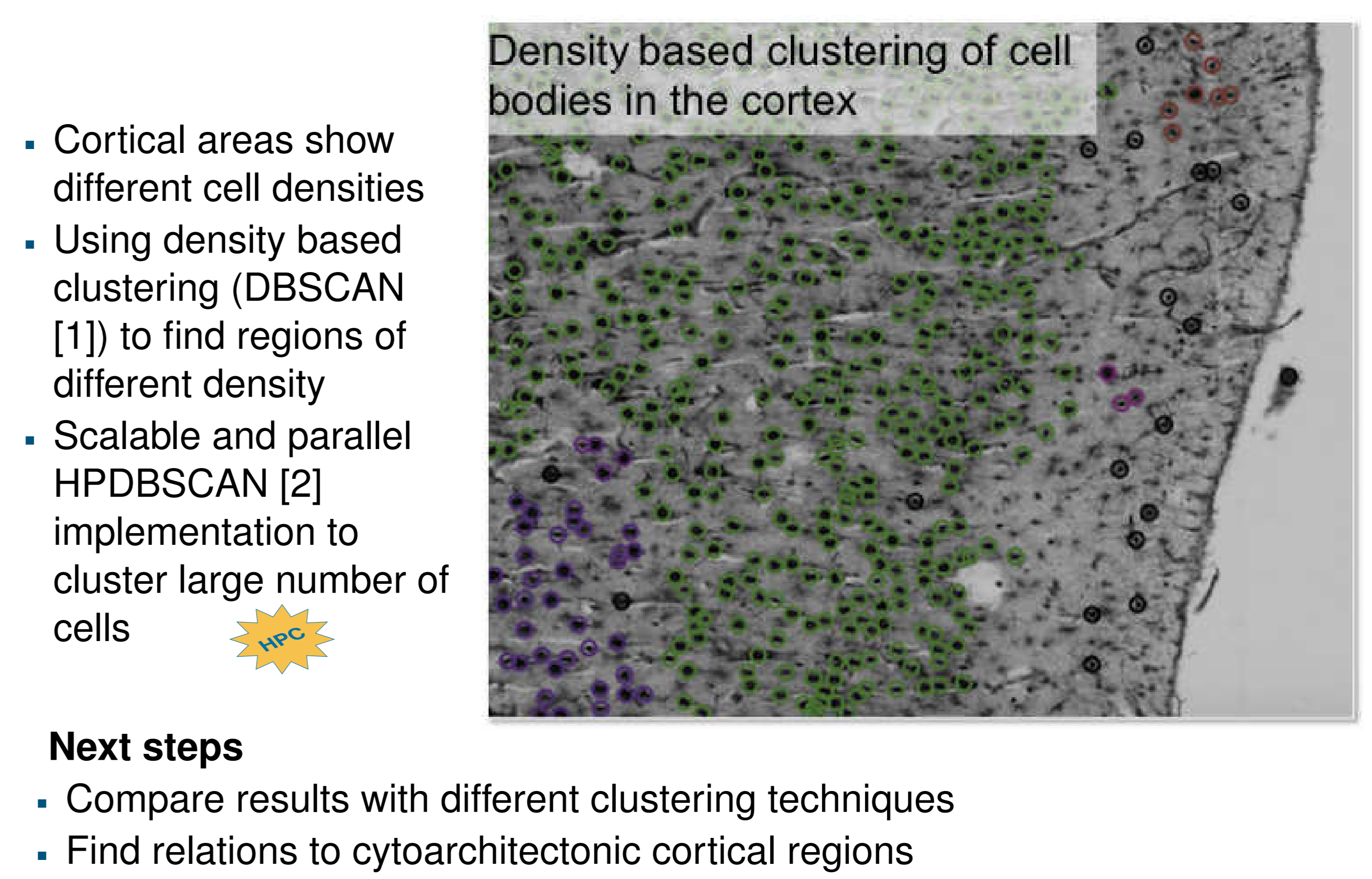
Cell detection



Parcellation of cytoarchitectonic cortical regions



Density clustering to reflect laminar layers



References

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