INDIANA UNIVERSITY

Classifyber, a streamline-based method for white matter bundle segmentation

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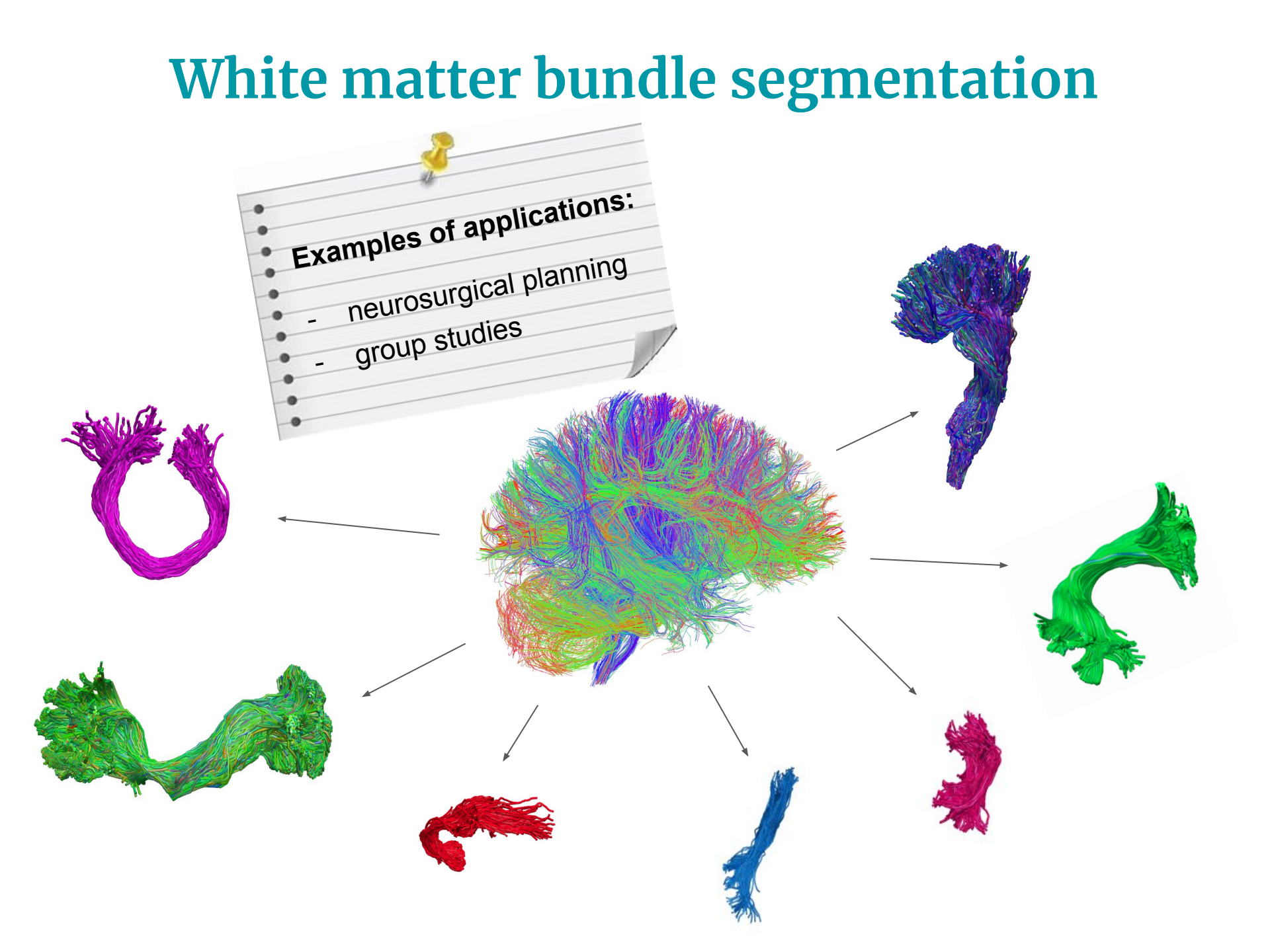
rapid-fire talk @ ACNN 2020 Workshop

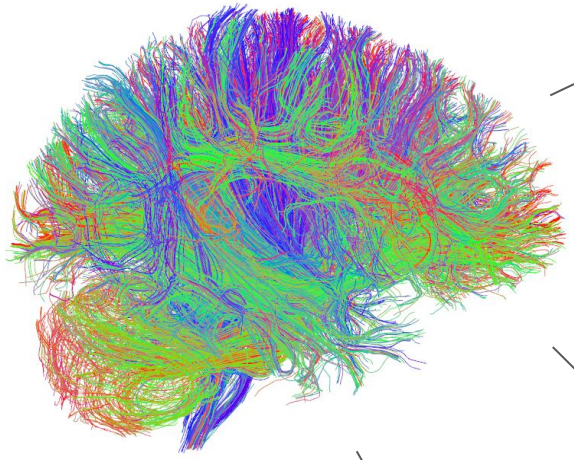
White matter bundle segmentation



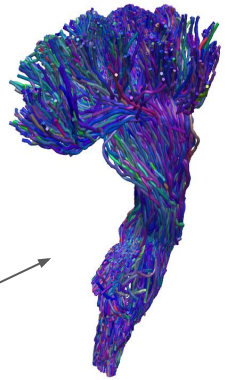
Challenges

VARIABILITY OF DATA QUALITY

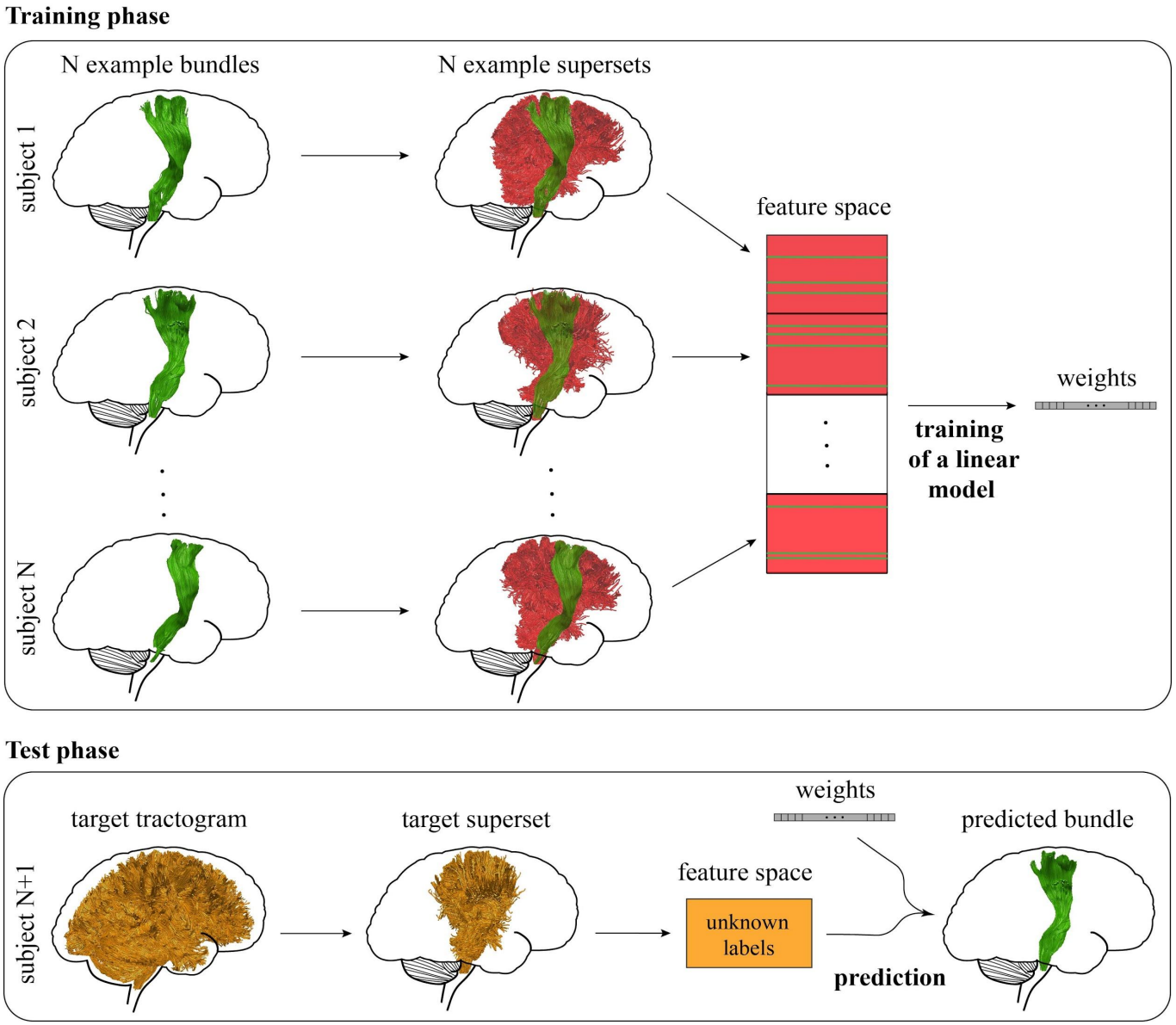
VARIABILITY OF TRACKING ALGORITHM



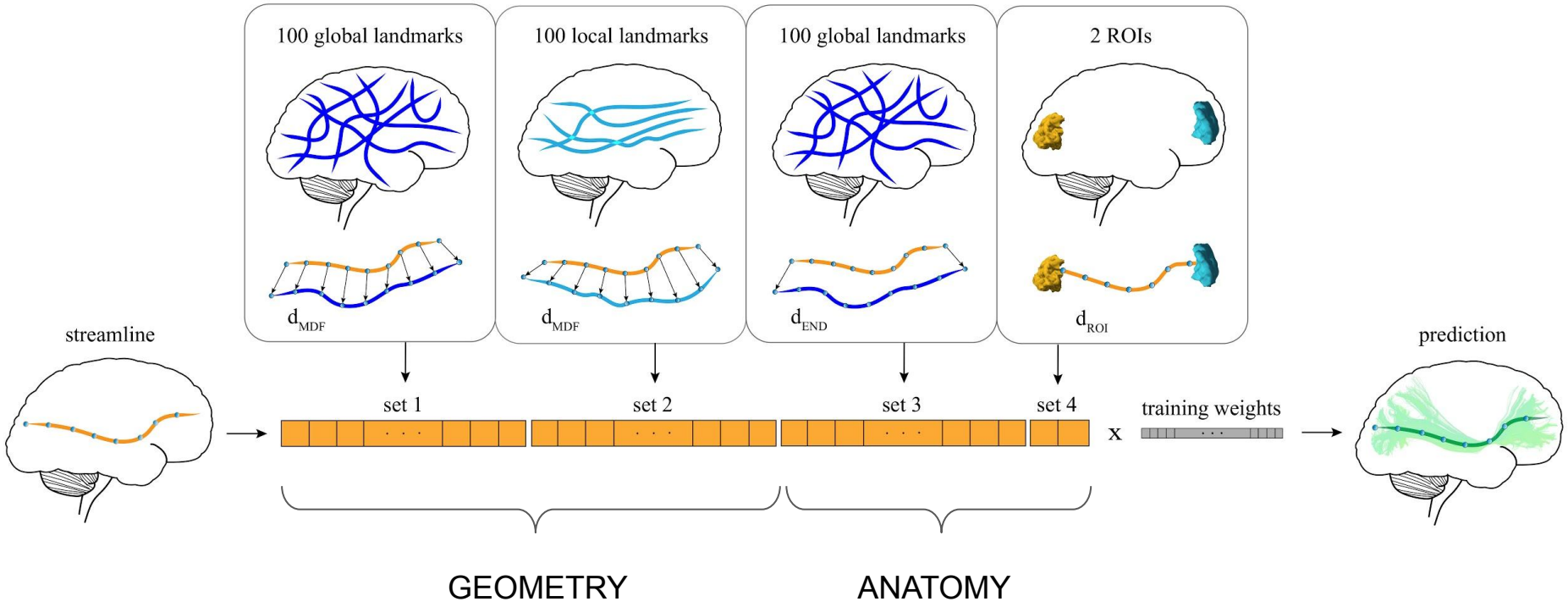
VARIABILITY OF BUNDLE SIZE



Proposed method: Classifyber

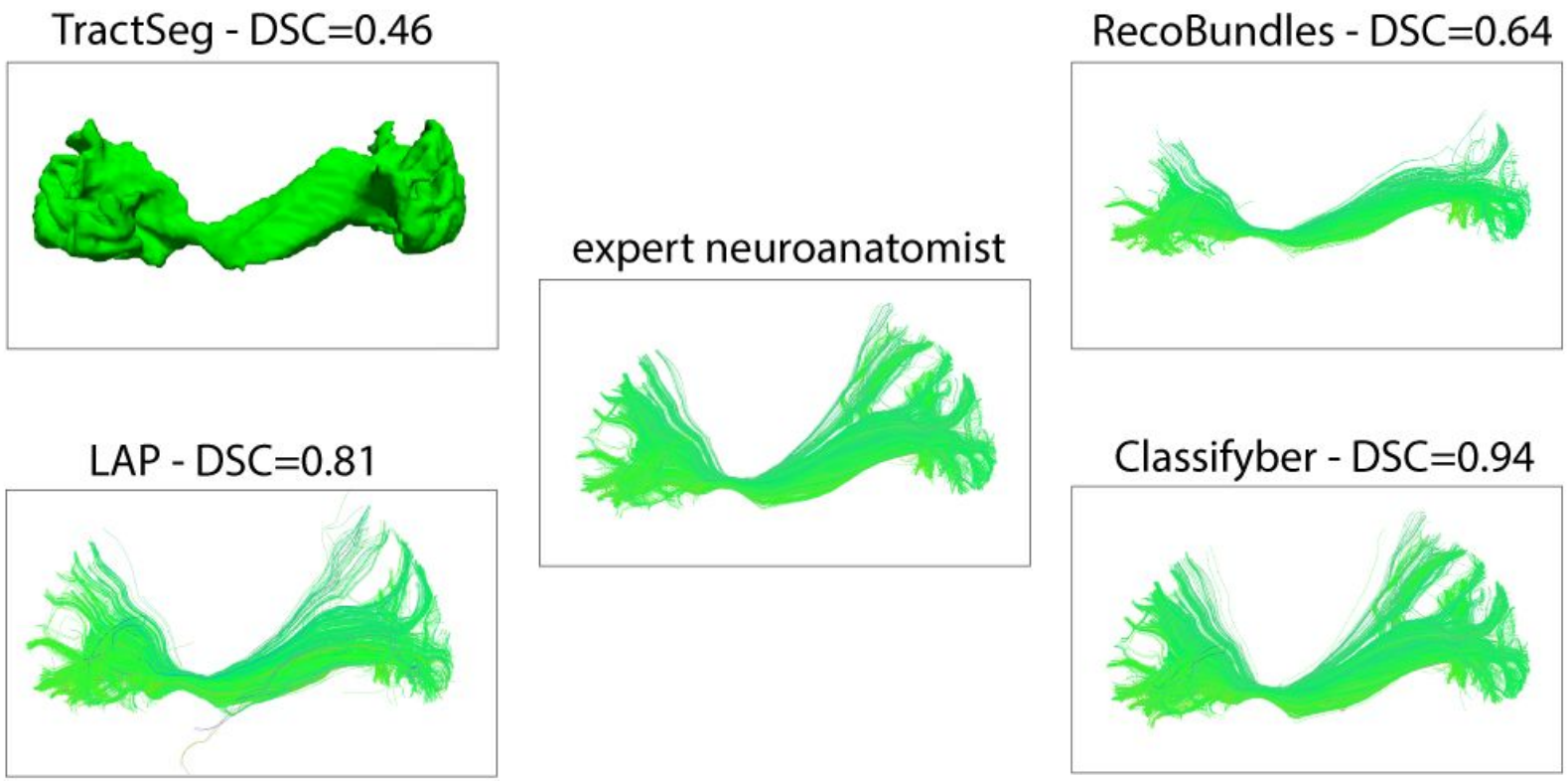


Proposed method: Classifyber (*)



(*) Bertò, G., Bullock, D., Astolfi, P., Hayashi, S., Zigiotto, L., Annicchiarico, L., Corsini, F., De Benedictis, A., Sarubbo, S., Pestilli, F., Avesani, P., Olivetti, E., *"Classifyber, a robust streamline-based linear classifier for white matter bundle segmentation"*. Under review in NeuroImage.

Results of one segmented bundle

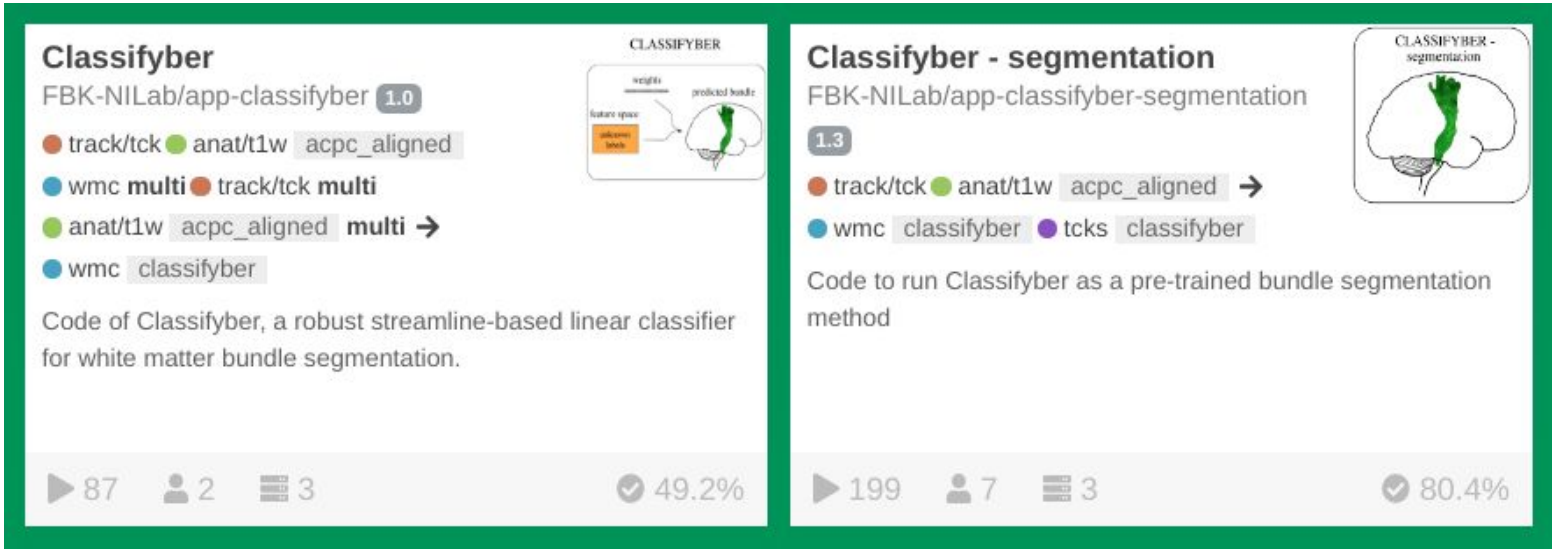


Qualitative comparison of a left inferior fronto-occipital fasciculus (IFOF). The Dice Similarity Coefficient (DSC) score represents the degree of overlap between the automatically segmented bundle and the bundle segmented by an expert neuroanatomist.

Web apps on brainlife.io

Two main **web apps** available on brainlife:

- Classifyber: https://doi.org/10.25663/brainlife.app.228
- Classifyber-segmentation: https://doi.org/10.25663/brainlife.app.265



Thank you!