

Poster
W602

NiMARE: Neuroimaging Meta-Analysis Research Environment

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Motivation

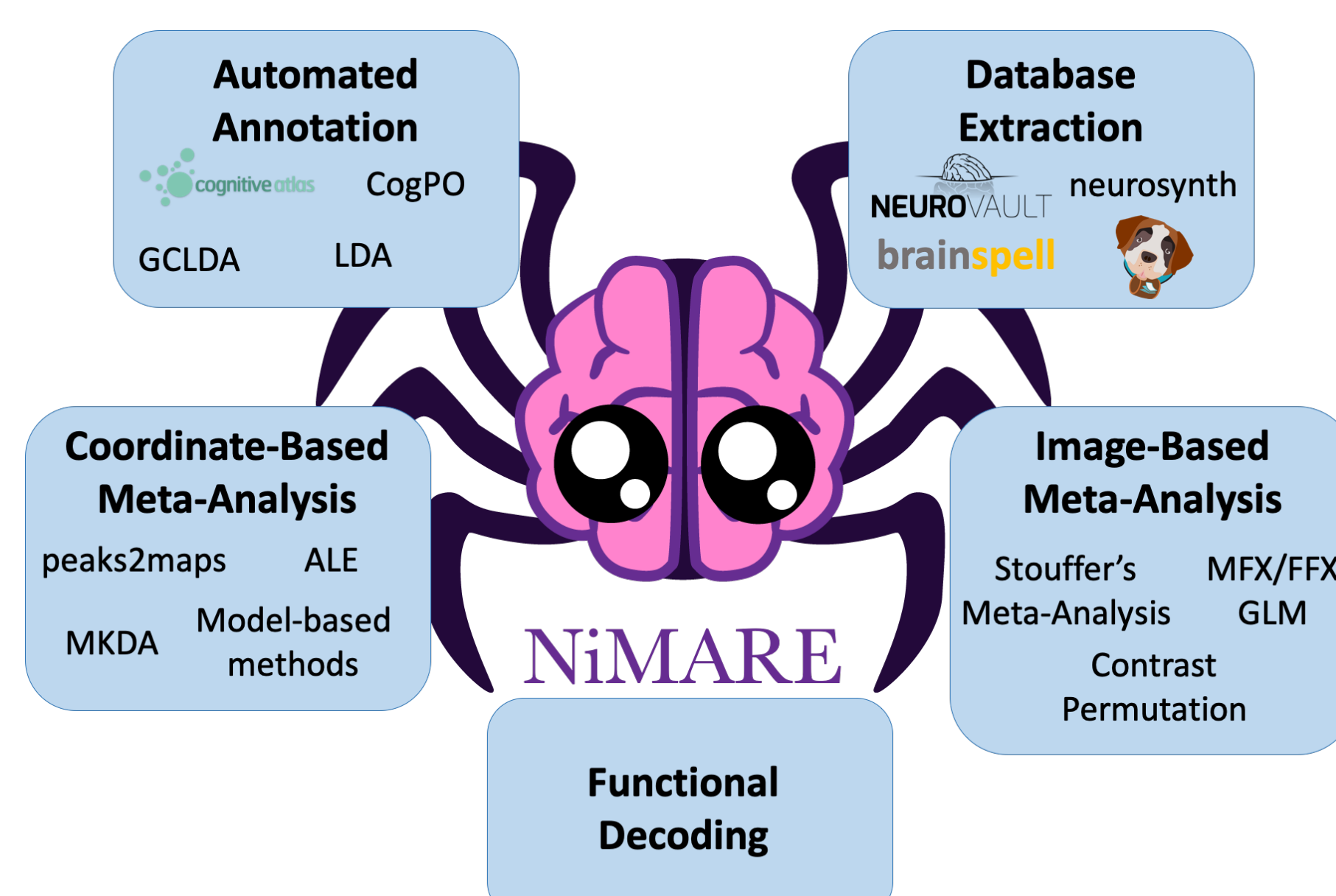
- fMRI research is subject to low signal-to-noise, low power, and high analytic flexibility.
- Meta-analysis helps alleviate these issues.
- Meta-analytic databases make large-scale meta-analysis possible.
- Meta-analytic algorithms have been extended for a range of interesting derivative analyses.

The Problem

Meta-analytic methods are spread out across a range of UIs and languages. Many never even make it from the paper to a useable implementation.

The Solution

An open-source, collaboratively developed, Python package with a standardized interface and extensive documentation.



Getting involved

We welcome new contributors!

If you know Python or are interested in neuroimaging meta-analysis, check out the contributing guidelines on the project website.

Objectives

1. A command line interface for common workflows, with citable write-ups of the methods used!
2. Interoperability with existing databases like BrainMap, Neurosynth, and NeuroVault.
3. Methods for database extraction, automated, annotation, meta-analysis, parcellation, and functional decoding.

Features

- Dataset conversion tools
- Image-based meta-analysis
- Activation likelihood estimation
- Multilevel kernel density analysis
- peaks2maps
- Meta-analytic coactivation modeling
- Discrete functional decoding
- Continuous functional decoding
- Generalized correspondence latent Dirichlet allocation

Position within the meta-analytic ecosystem

