

# BIDSme: expandable BIDS-ifier of brain imagery datasets

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## INTRODUCTION/MOTIVATION

For a long time, the neuroimaging community suffered from a lack of standardized file structure, formats and metadata conventions. Different laboratories had their own, idiosyncratic ways to organize data. Analyses were then performed with scripts tailored to specific data structures, which made analysis workflow and data sharing unnecessarily complicated. Consequently, it was difficult to ensure results repeatability and validation.

The BIDS[1] was introduced to change this situation; it imposes a standard data structure and defines the required associated metadata. Once a dataset follows the imposed structure, any analysis tool, supporting BIDS formatting, should be able to automatically find the needed data to process it. Moreover, BIDS-formatted data are self-consistent and complete, i.e. all necessary data and metadata for their processing are included and explicitly defined, thus allowing easier reuse and sharing with others.

## METHODS

We developed an open-source Python tool under GPL-2 license and freely available on GitHub (<https://github.com/CyclotronResearchCentre/bidsme>). We designed the tool to be an all-in-one organizer tool, that not only renames and re-structures the original data files, but also extracts and formats the necessary metadata. We provided a tutorial and test dataset, and a companion scientific paper [2]. The tool complies with the latest version of BIDS (schema v1.10).

## RESULTS AND DISCUSSION

BIDSme can be used as Docker container, Python package and command-line tool. During the data organization, BIDSme provides the user with the full control over these processes, allowing the use of non-standard metadata and file names, as well as the addition of modalities not yet described by the BIDS. Instead of strictly imposing this structure, BIDSme allows the user to fully configure how the source dataset will be organized and what metadata will be included.

**Keywords: BIDS**

**REFERENCES**

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