

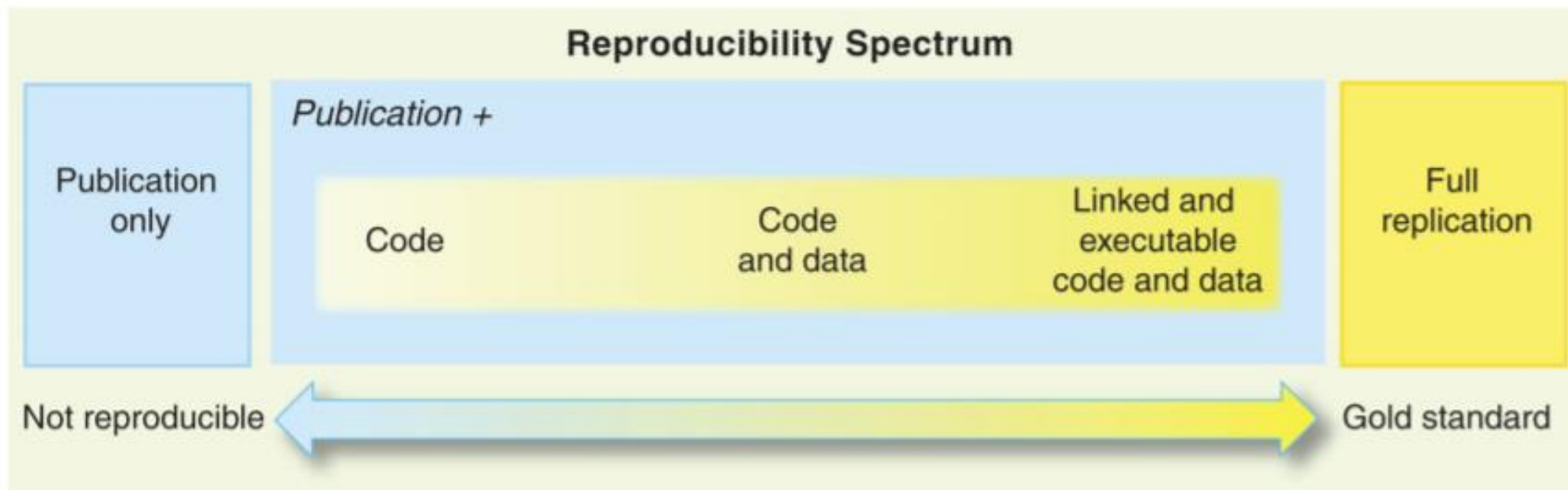
# Community built standards for brain and behavioural data: the BIDS and Psych-DS initiatives

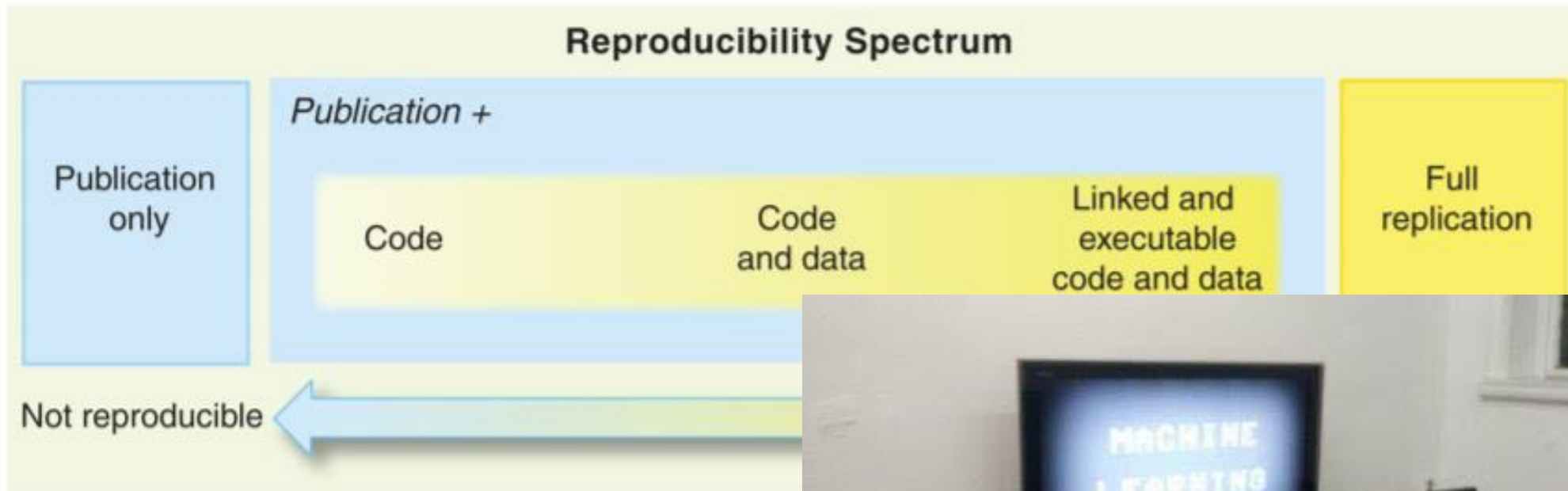
Kirstie Whitaker  
Society for Neuroscience  
5 November 2018

DOI: [10.6084/m9.figshare.7297520](https://doi.org/10.6084/m9.figshare.7297520)



- Research fellow at the Alan Turing Institute – the UK’s national institute for Data Science and Artificial Intelligence.
- Senior research associate in the Department of Psychiatry at the University of Cambridge.
- Passionate about making it easy for people to share evidence of the work they did
  - Published papers without data or code are just nice stories!





Peng, R. D. *Science* doi: 10.1126/science.1213847 (2011).

Image credit: [https://www.reddit.com/r/ProgrammerHumor/comments/7e9yj1/machine\\_learning](https://www.reddit.com/r/ProgrammerHumor/comments/7e9yj1/machine_learning)

# BRAIN IMAGING DATA STRUCTURE

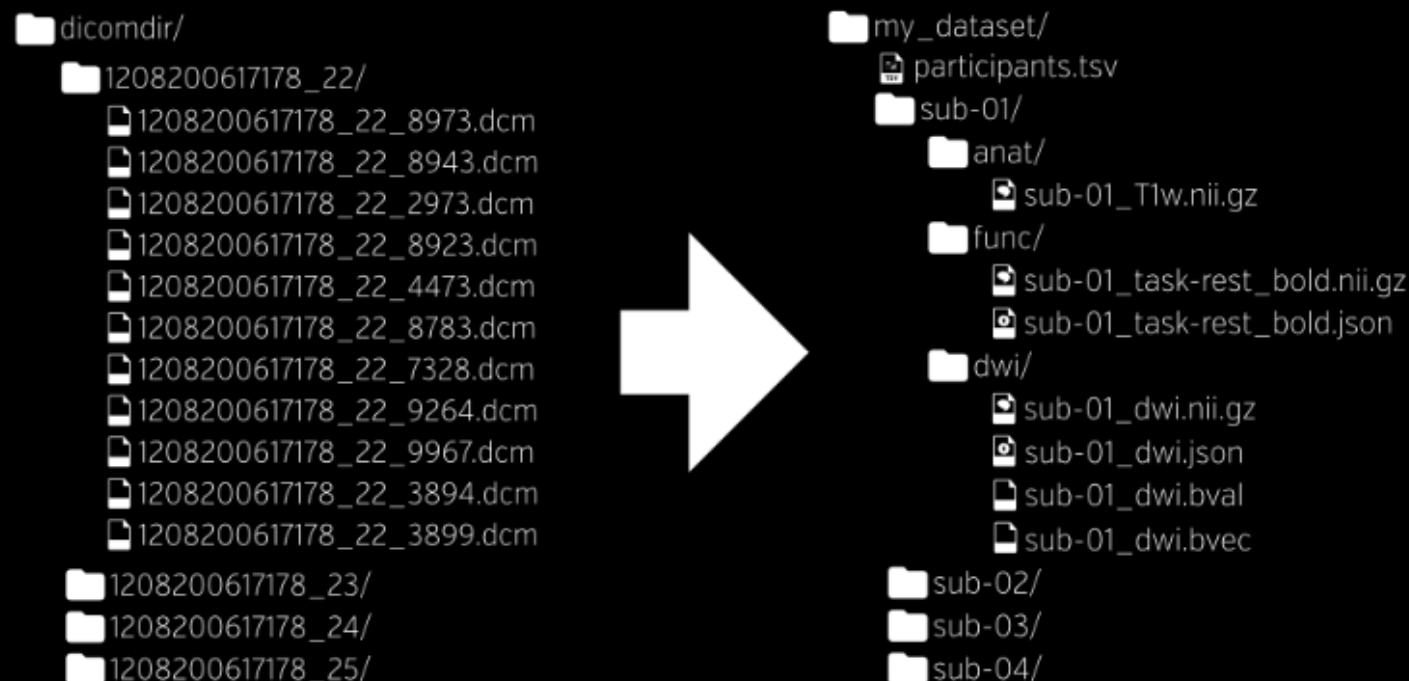
A simple and intuitive way to organize and describe your neuroimaging and behavioral data.





## ABOUT BIDS

Neuroimaging experiments result in complicated data that can be arranged in many different ways. So far there is no consensus how to organize and share data obtained in neuroimaging experiments. Even two researchers working in the same lab can opt to arrange their data in a different way. Lack of consensus (or a standard) leads to misunderstandings and time wasted on rearranging data or rewriting scripts expecting certain structure. Here we describe a simple and easy to adopt way of organizing neuroimaging and behavioral data.



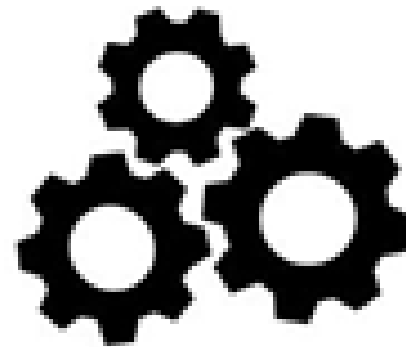
F<sub>indable</sub>



A<sub>ccessible</sub>



I<sub>nteroperable</sub>



R<sub>eusable</sub>



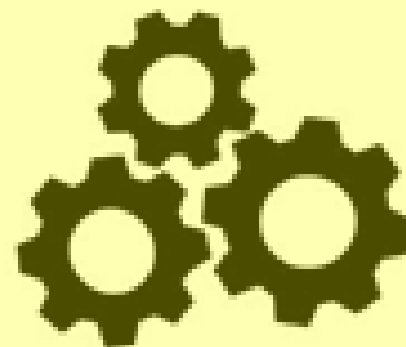
F<sub>indable</sub>



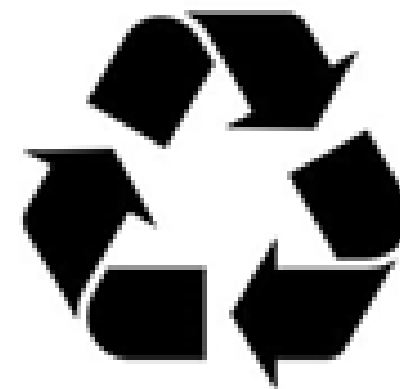
A<sub>ccessible</sub>



I<sub>nteroperable</sub>



R<sub>eusable</sub>





## BIDS

### Raw

```
data
├── README
├── CHANGES
├── participants.tsv
├── dataset_description.json
├── code
│   ├── deface.py
│   └── dicom_import.m
├── sub-01
│   ├── sub-01_scans.tsv
│   ├── anat
│   │   ├── sub-01_T1w.nii.gz
│   │   └── sub-01_T1w.json
│   ├── func
│   │   ├── sub-01_task-nback_bold.nii.gz
│   │   ├── sub-01_task-nback_bold.json
│   │   └── sub-01_task-nback_events.tsv
│   └── beh
│       ├── sub-01_task-nback_beh.tsv
│       └── sub-01_task-nback_beh.json
├── sub-02
├── sub-03
├── ...
└── sub-??
```

### Derivatives

```
derivatives
├── README
├── CHANGES
├── mriqc
│   ├── sub-01
│   │   └── sub-01_T1w.html
│   └── fmripipelineprocess_01
│       ├── sub-01
│       │   ├── anat
│       │   └── func
│       ├── ...
│       └── sub-??
└── spm
    ├── group
    ├── sub-01
    ├── ...
    └── sub-??
```

### Source

```
sourcedata
├── README
├── CHANGES
├── Sequences_paramaters.pdf
├── sub-01
│   ├── sub-01.dicom.tgz
│   ├── logfile
│   │   ├── sub-01_task-nback_events_logfile.txt
│   │   └── sub-01_task-nback_beh_logfile.txt
│   └── note
├── ...
└── sub-??
```

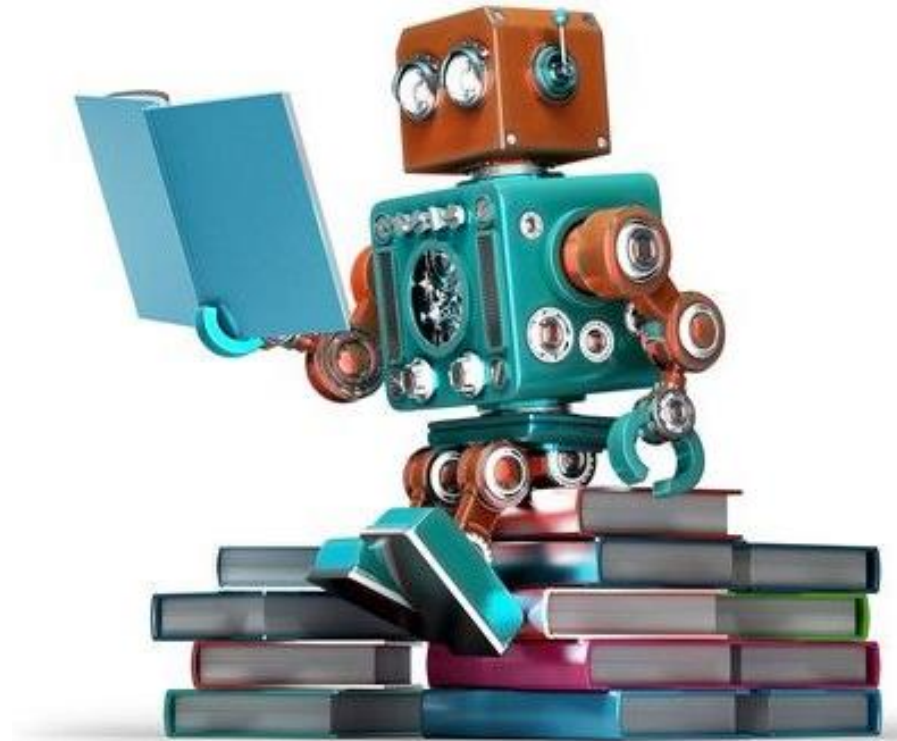
```

{
  "Name": "The mother of all experiments",
  "BIDSVersion": "1.0.1",
  "License": "CC0",
  "Authors": [
    "Paul Broca",
    "Carl Wernicke"
  ],
  "Acknowledgements": "Special thanks to Korbinian Brodmann for help in formatting this dataset in BIDS. We thank Alan Lloyd Hodgkin and Andrew Huxley for helpful comments and discussions about the experiment and manuscript; Hermann Ludwig Helmholtz for administrative support; and Claudius Galenus for providing data for the medial-to-lateral index analysis.",
  "HowToAcknowledge": "Please cite this paper: https://www.ncbi.nlm.nih.gov/pubmed/001012092119281",
  "Funding": [
    "National Institute of Neuroscience Grant F378236MFH1",
    "National Institute of Neuroscience Grant 5RMZ0023106"
  ],
  "ReferencesAndLinks": [
    "https://www.ncbi.nlm.nih.gov/pubmed/001012092119281",
    "Alzheimer A., & Kraepelin, E. (2015). Neural correlates of presenile dementia in humans. Journal of Neuroscientific Data, 2, 234001. http://doi.org/1920.8/jndata.2015.7"
  ],
  "DatasetDOI": "10.0.2.3/dfjj.10"
}

```

## dataset\_description.json

The file dataset\_description.json is a JSON file describing the dataset. Every dataset MUST include this file with the following fields:



[Pull requests](#) [Issues](#) [Marketplace](#) [Explore](#)[docs](#) [bids-standard](#) / [bids-starter-kit](#)[Unwatch](#) 21[★ Unstar](#) 34[Fork](#) 21[Code](#)[Issues](#) 15[Pull requests](#) 1[Projects](#) 1[Wiki](#)[Insights](#)[Settings](#)

# Metadata file formats

[Edit](#)[New Page](#)

dorahermes edited this page on 17 Jan · 7 revisions

Metadata are stored in .json and .tsv files. These files are language-agnostic, meaning you can work with them in, e.g., Python, Matlab, or R. This page covers common ways to read/write these files in common languages for neuroscience analysis.

[Pages](#) 14

## JSON Files

JSON files are text files that take the following structure: `{'key': 'value', 'key2': 'value2', 'key3': {'subkey1': 'subvalue1'}} .`

Note that they can be nested (curly brackets within curly brackets). Here are some common ways to read / write these files.

## Online

To read/write JSON online, we recommend the following website:

<http://jsoneditoronline.org/>

## Matlab

There are many toolboxes in Matlab for reading / writing JSON files. One example is:

<https://github.com/allmflndr/JSONio>

[Home](#)[The BIDS Folder Hierarchy](#)

A guide to the different files and how they are organised in the BIDS directory structure

[Tutorials](#)[Metadata File Formats](#)[Dataset Examples](#)

Links to BIDS compliant datasets with some sourcedata

[EEG Formatting Examples](#)[BIDS Validator Info](#)[BIDS Apps Help](#)

<https://github.com/bids-standard/bids-starter-kit/wiki/Metadata-file-formats>

## Matlab

There are many toolboxes in Matlab for reading / writing JSON files. One example is:

<https://github.com/gllmflndn/JSONio>

### Reading a `.json` file

```
jsonread([filename])
```

### Writing a `.json` file

```
root_dir = './';
project = 'temp';
sub_id = '01';
ses_id = '01';
acquisition = 'anat';

anat_json_name = fullfile(root_dir,project,...
    ['sub-' sub_id],...
    ['ses-' ses_id],...
    acquisition,...
    ['sub-' sub_id '_ses-' ses_id '_T1W.json']);

% Assign the fields in the Matlab structure that can be saved as a json:
anat_json.Manufacturer = 'GE';
anat_json.ManufacturersModelName = 'Discovery MR750';
anat_json.MagneticFieldStrength = 3;
anat_json.PulseSequence = 'T1 weighted SPGR';

json_options.indent = '    '; % this makes the json look prettier when opened in a txt editor
jsonwrite(loc_json_name,anat_json,json_options)
```

## Python

[EEG Formatting Examples](#)

[BIDS Validator Info](#)

[BIDS Apps Help](#)

Helpful links and a FAQ about BIDS Apps

[BIDS Extensions](#)

[Glossary](#)

[Publications](#)

[Community Resources](#)

A collection of resources from the community including slideshows / presentations / graphics / etc.

[Useful Links](#)

A collection of links to useful code / other repositories relevant to BIDS

[Contact](#)

Clone this wiki locally

<https://github.com/bids-stan>



## Python

---

In Python, JSON support is built into the core library, meaning you don't need to install anything to read/write JSON files. In addition, the structure of JSON is almost identical to that of Python dictionaries (assuming you are only storing text / numbers in the dictionary). To that extent.

### Reading a `.json` file

```
import json
with open('myfile.json', 'r') as ff:
    data = json.load(ff)
```

### Writing a `.json` file

```
import json
data = {'field1': 'value1', 'field2': 3, 'field3': 'field3'}
with open('my_output_file.json', 'w') as ff:
    json.dump(data, ff)
```

## R

---

There are several packages for reading and writing JSON files from R. In this example, we will be using jsonlite. Remember to install and call a package before using it.

<https://github.com/jeroen/jsonlite>

### Installing required package

```
install.packages('jsonlite')
```

### Reading a `.json` file:

## TSV files

A Tab-Separate Values (TSV) file is a text file where tab characters ( `\t` ) separate fields that are in the file. It is structured as a table, with each column representing a field of interest, and each row representing a single datapoint.

Below are ways to read / write TSV files in common languages.

### Matlab

Reading a `.tsv` file:

```
readtable([filename], 'FileType', 'text', 'Delimiter', '\t', 'TreatAsEmpty', {'N/A', 'n/a'});
```

Writing a `.tsv` file:

```
root_dir = 'MyRootDir';
bidsProject = 'temp';
bids_participants_name = ['participants.tsv'];

participant_id = ['sub-01'; 'sub-02']; % onsets in seconds
age = [20 30];
sex = ['m'; 'f'];

t = table(participant_id, age, sex);
writetable(t, fullfile(root_dir, bidsProject, bids_participants_name), 'FileType', 'text', 'Delimiter', '\t');
```

### Python

In Python, the easiest way to work with TSV files is to use the Pandas library. This provides a high-level structure to organize, manipulate, clean, and visualize tabular data. You can install `pandas`

# Welcome to the BIDS Starter Kit



How to get started with the Brain Imaging Data Structure

A community-curated collection of tutorials, wikis, and templates to get you started with creating BIDS compliant datasets.

[BIDS Homepage](#) | [Wiki](#) | [Standard](#) | [Tutorials](#) | [Chat](#) | [Forum](#)

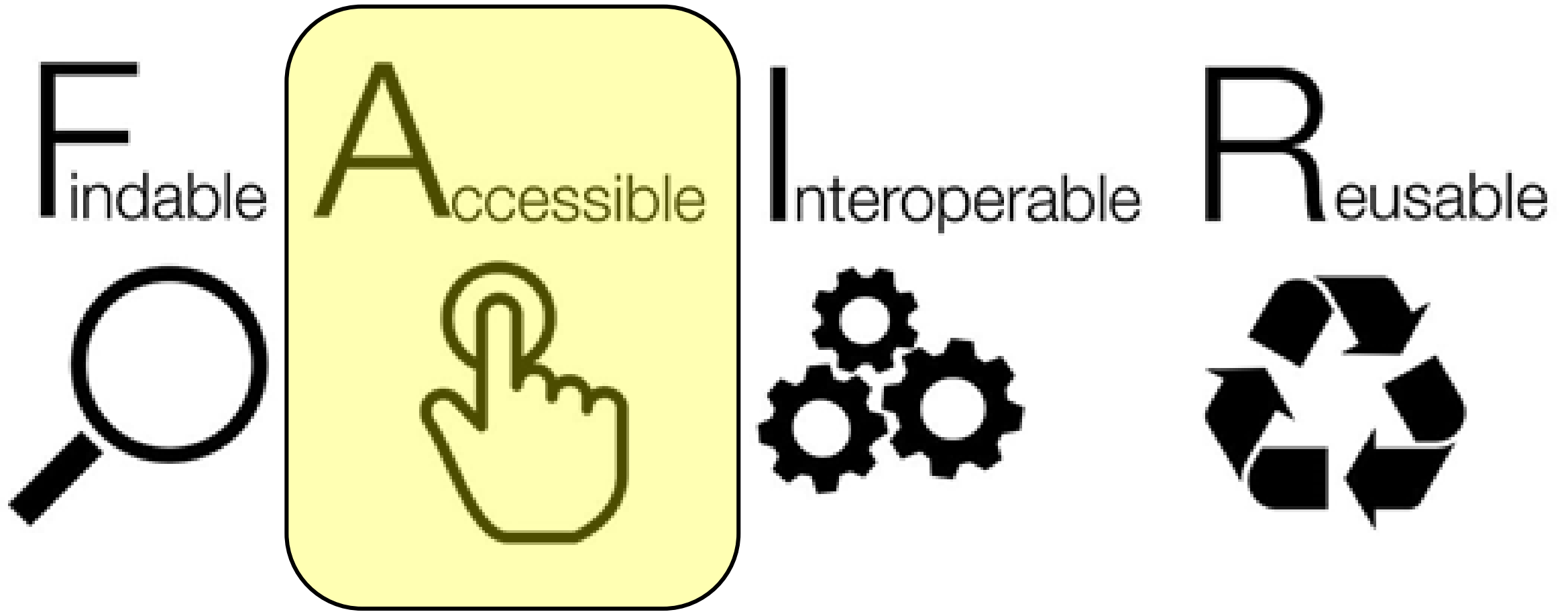
Click to view the intro video!



## Table of Contents

- [Project Summary](#)
- [Philosophy](#)





[Pull requests](#) [Issues](#) [Marketplace](#) [Explore](#)[📄 bids-standard](#) / [bids-starter-kit](#)[👁 Unwatch](#) 21[★ Unstar](#) 34[🍴 Fork](#) 21[↔ Code](#)[🔔 Issues](#) 15[🔗 Pull requests](#) 1[📁 Projects](#) 1[📖 Wiki](#)[📊 Insights](#)[⚙ Settings](#)

Collection of tutorials, wikis, and templates to get you started with creating BIDS compliant datasets

[Edit](#)[Manage topics](#)[📄 181 commits](#)[🌿 5 branches](#)[📦 3 releases](#)[👤 15 contributors](#)

Branch: master ▾

[New pull request](#)[Create new file](#)[Upload files](#)[Find file](#)[Clone or download ▾](#)

dorahermes Merge pull request #91 from Remi-Gau/bids\_report ...

Latest commit 2711f87 a day ago

[📁 matlabCode](#)

Merge branch 'master' into bids\_report

13 days ago

[📁 pythonCode](#)

Update README.md

3 months ago

[📁 reports](#)

Update Google-2018-report.md

2 months ago

[📁 templates](#)

add templates for filters and active reference EEG

2 days ago

[📁 wiki-archives](#)

add archive of wiki to repo

2 months ago

[📄 .gitignore](#)

adding python readme

6 months ago

[📄 BIDS-Dependencies-List.md](#)

Update BIDS-Dependencies-List.md

3 months ago

[📄 CODE\\_OF\\_CONDUCT.md](#)

Add links to key maintainers

3 months ago

[📄 CONTRIBUTING.md](#)

Add good first issue to contributing guidelines

2 months ago

[📄 README.md](#)

Tidy up the markdown a little

a month ago

[📄 \\_config.yml](#)

Update \_config.yml

4 months ago

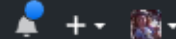
[📖 README.md](#)

<https://github.com/bids-standard/bids-starter-kit>



Search or jump to...

[Pull requests](#) [Issues](#) [Marketplace](#) [Explore](#)



[bids-standard / bids-starter-kit](#)

[Unwatch](#) 21

[★ Unstar](#) 34

[Fork](#) 21

[Code](#)

[Issues](#) 15

[Pull requests](#) 1

[Projects](#) 1

[Wiki](#)

[Insights](#)

[Settings](#)

# Home

[Edit](#)

[New Page](#)

Kirstie Whitaker edited this page on 2 Aug · 14 revisions



**BIDS STARTER KIT WIKI**  
Simple tips and references for an easy start to BIDS

► Pages 14

[Home](#)

[The BIDS Folder Hierarchy](#)

A guide to the different files and how they are organised in the BIDS directory structure

[Tutorials](#)

[Metadata File Formats](#)

[Dataset Examples](#)

Links to BIDS compliant datasets with some sourcedata

[EEG Formatting Examples](#)

[BIDS Validator Info](#)

[BIDS Apps Help](#)

## Welcome to the home page of the wiki!

This is a community edited source of information and collection of links to help you get started with BIDS. Some resources include a description of BIDS-compatible folder structures, a glossary to help with some of the technical terms, and some tips and tricks to get you started.

The various pages in this wiki can be found in the sidebar to your right 📖

Please note that this wiki is actively maintained and still growing, so please help us add anything that you feel would be useful! You can read more information about [how to contribute in our guidelines](#).

<https://github.com/bids-standard/bids-starter-kit/wiki>

[Pull requests](#) [Issues](#) [Marketplace](#) [Explore](#) [bids-standard / bids-starter-kit](#)[Unwatch](#) 21[★ Unstar](#) 34[🔗 Fork](#) 21[↔ Code](#)[🔔 Issues](#) 15[🔗 Pull requests](#) 1[📁 Projects](#) 1[📖 Wiki](#)[📊 Insights](#)[⚙ Settings](#)

Branch: master ▾

 [bids-starter-kit / CONTRIBUTING.md](#)[Find file](#)[Copy path](#)

KirstieJane Add good first issue to contributing guidelines

bcabfa7 on 1 Aug

[3 contributors](#)

224 lines (137 sloc) | 15.2 KB

[Raw](#)[Blame](#)[History](#)

## Contributing to the BIDS Starter Kit

🎉🎈📦 Welcome to the BIDS Starters Kit repository! 📦🎈🎉

🌈👤🌟 We're so excited you're here and want to contribute. 🌟👤🌈

The point of this starter kit is to welcome new users and contributors to the BIDS community. We hope that these guidelines are designed to make it as easy as possible to get involved. If you have any questions that aren't discussed below, please let us know through one of the many ways to [get in touch](#).

### Table of contents

Been here before? Already know what you're looking for in this guide? Jump to the following sections:

- [Joining the BIDS community](#)
- [Get in touch](#)
- [Contributing through GitHub](#)

<https://github.com/bids-standard/bids-starter-kit/blob/master/CONTRIBUTING.md>

## Joining the community

BIDS - the [Brain Imaging Data Structure](#) - is a growing community of neuroimaging enthusiasts, and we want to make our resources accessible to and engaging for as many researchers as possible.

We therefore require that all contributions **adhere to our [Code of Conduct](#)**.

How do you know that you're a member of the BIDS community? You're here! You know that BIDS exists! You're officially a member of the community. It's THAT easy! Welcome! 🤗👋

## Get in touch

There are lots of ways to get in touch with the team maintaining the BIDS Starter Kit.

- Our channel in the [BrainHack slack team](#)
  - Click [here](#) for an invite to the slack workspace
- Our [Gitter channel](#)
- The [BIDS mailing list](#)
- Via the [Neurostars forum](#).
  - This is our preferred way to answer questions so that others who have similar questions can benefit too! Even if your question is not well-defined, just post what you have so far and we will be able to point you in the right direction!
  - Some example questions that have already been answered include: [BIDS file naming specifications](#) and [BIDS beginner - convert data to BIDS format](#)

If you're here during summer 2018 🍦🌴, you should reach out to our lovely [Google Summer of Code](#) student [Patrick Park](#). He'll be monitoring all the channels above and it would really help his project along if you said hello and passed along any feedback you have 💖. Don't be shy, the newer you are the more valuable your feedback is 👍

## Contributing through GitHub

[git](#) is a really useful tool for version control. [GitHub](#) sits on top of git and supports collaborative and distributed working.



## Joining the community

BIDS - the [Brain Imaging Data Structure](#) - is a growing community of neuroimaging enthusiasts, and we want to make our resources accessible to and engaging for as many researchers as possible.

We therefore require that all contributions [adhere to our Code of Conduct](#).

How do you know that you're a member of the BIDS community? You're here! You know that BIDS exists! You're officially a member of the community. It's THAT easy! Welcome! 🤗👋

## Get in touch

There are lots of ways to get in touch with the team maintaining the BIDS Starter Kit.

- Our channel in the [BrainHack slack team](#)
  - Click [here](#) for an invite to the slack workspace
- Our [Gitter channel](#)
- The [BIDS mailing list](#)
- Via the [Neurostars forum](#).
  - This is our preferred way to answer questions so that others who have similar questions can find the answer. Even if your question is not well-defined, just post what you have so far and we'll help you find the right direction!
  - Some example questions that have already been answered include: [BIDS file naming specifications](#) and [BIDS beginner - convert data to BIDS format](#)

If you're here during summer 2018 🍹🌴, you should reach out to our lovely [Google Summer of Code](#) student [Patrick Park](#). He'll be monitoring all the channels above and it would really help his project along if you said hello and passed along any feedback you have 💖. Don't be shy, the newer you are the more valuable your feedback is 👍

## Contributing through GitHub

[git](#) is a really useful tool for version control. [GitHub](#) sits on top of git and supports collaborative and distributed working.



<https://github.com/bids-standard/bids-starter-kit/blob/master/CONTRIBUTING.md>

## Tags &gt; bids

| Topic                                                                                                                      | Category | Users                                                                                                                                                                                                                                                       | Replies | Views | Activity |
|----------------------------------------------------------------------------------------------------------------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------|----------|
| <b>Extracting time series from fMRI BIDS data</b><br>neuroimaging, bids, fmri                                              |          |    | 4       | 32    | 8h       |
| <b>Error when converting t1w to BIDS: t1w file with too many dimensions</b><br>bids, bids-validator                        |          |    | 5       | 43    | 1d       |
| <b>Mrdefcer/ same data, different results (defacing)</b><br>neuroimaging, bids, fmri                                       |          |                                                                                       | 1       | 54    | 4d       |
| <b>INCF: Call for community review of the Brain Imaging Data Structure</b><br>bids, community-review                       |          |                                                                                                                                                                          | 0       | 62    | 6d       |
| <b>Providing raw RegEx to debug BIDS file naming / conversion issues with Heudiconv</b><br>bids, heudiconv, bids-validator |          |                                                                                       | 3       | 134   | 7d       |
| <b>How to install BIDS</b><br>bids                                                                                         |          |                                                                                   | 1       | 60    | 8d       |
| <b>Tabular file contains custom columns not described in a data dictionary</b><br>bids                                     |          |                                                                                   | 3       | 65    | 11d      |



## BIDS format: [CODE1]NOT\_INCLUDED

bids



kaylena88

12d

Sep 21

Hello,

I have tried to follow bids format for the field maps that I have acquired for my task-fmri data. To my knowledge I have followed the specifications, however when I use the BIDS validator, it identifies all 256 \_epi files with errors. Could you please highlight my error in the naming convention of these files? I have attached an example of the the Error output from the BIDS validator below. Many thanks.

Error 1: [Code 1] NOT\_INCLUDED

Files with such naming scheme are not part of BIDS specification. This error is most commonly caused by typos in file names that make them not BIDS compatible. Please consult the specification and make sure your files are named correctly. If this is not a file naming issue (for example when including files not yet covered by the BIDS specification) you should include a ".bidsignore" file in your dataset . Please note that derived (processed) data should be placed in /derivatives folder and source data (such as DICOMS or behavioural logs in proprietary formats) should be placed in the /sourcedata folder.]

sub-01\_task-fogplank\_dir-down\_run-01\_epi.json\*\* \*\*0.972 KB | application/json

Location:

bids/sub-01/fmap/sub-01\_task-fogplank\_dir-down\_run-01\_epi.json

Reason:

Files with such naming scheme are not part of BIDS specification. This error is most commonly caused by typos in file names that make them not BIDS compatible. Please consult the specification and make sure your files are named correctly. If this is not a file naming issue (for example when including files not yet covered by the BIDS specification) you should include a ".bidsignore" file in your dataset. Please note that derived

1 / 4

Sep 21

12d ago





ChrisGorgolewski Regular

12d

As per [specification](#) fmap/\*\_epi files need to follow the following naming convention:

```
sub-<label>[_ses-<session_label>][_acq-<label>]_dir-<dir_label>[_run-  
<run_index>]_epi.json
```

task keyword is not allowed. You need to use

```
sub-01_dir-down_run-01_epi.json
```

file name and use the `IntendedFor` field inside the JSON to specify which bold file this fieldmap data should be used for.



Reply



kaylena88

12d

Thanks for clarifying that, however how do I have the task and rest run-01 files differentiated? The files names will be the same for these fieldmaps?

Thanks



Reply



Remi-Gau

12d

From the specs about fieldmaps

Sep 21

2 / 4

Sep 21

12d ago





Remi-Gau

12d

From the specs about fieldmaps

Multiple fieldmaps can be stored. In such case the “\_run-1”, “\_run-2” should be used. The optional “acq-” key/value pair corresponds to a custom label the user may use to distinguish different set of parameters.

So AFAIU for example you can use run-01 for task and run-02 for rest and specify which fieldmap goes to which bold runs in the .json file.

Hope it helps.

2



Reply

Sep 21

3 / 4

Sep 21

12d ago

Bookmark

Share

Flag

Reply

☐ Normal

You will be notified if someone mentions your @name or replies to you.

## Suggested Topics

Topic

Category

Replies

Views

Activity

## Contributing through GitHub

[git](#) is a really useful tool for version control. [GitHub](#) sits on top of git and supports collaborative and distributed working.

We know that it can be daunting to start using git and GitHub if you haven't worked with them in the past, but the BIDS Starter Kit maintainers are here to help you figure out any of the jargon or confusing instructions you encounter! ❤️

In order to contribute via GitHub you'll need to set up a free account and sign in. Here are some [instructions](#) to help you get going. Remember that you can ask us any questions you need to along the way.



## Writing in markdown

GitHub has a helpful page on [getting started with writing and formatting on GitHub](#).

Most of the writing that you'll do will be in [Markdown](#). You can think of Markdown as a few little symbols around your text that will allow GitHub to render the text with a little bit of formatting. For example you could write words as bold ( **`**bold**`** ), or in italics ( *`*italics*`* ), or as a [link](#) ( `[link](https://https://youtu.be/dQw4w9WgXcQ)` ) to another webpage.

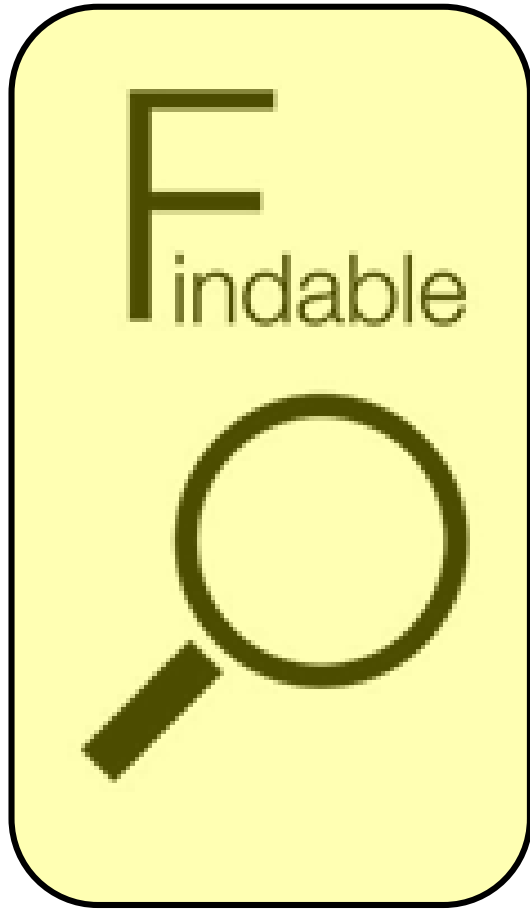
## Where to start: wiki, code and templates

### Wiki ([link](#))

We hope that the easiest place to find information about BIDS is the [starter kit wiki](#).

You only need to be logged in to GitHub to edit the wiki. So, there's no need for a pull request if you just want to fix a typo or add a useful link!

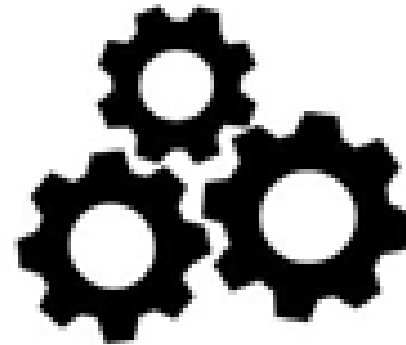
Here's a useful [introduction to GitHub wikis](#). Have a read through the pages that already exist in the wiki and please EDIT AWAY! 🍌💣🌟



A<sub>ccessible</sub>



I<sub>nteroperable</sub>



R<sub>eusable</sub>





# OpenNEURO

A free and open platform for analyzing  
and sharing neuroimaging data



Sign in with Google



Sign in with ORCID

Browse Public Datasets



## Get Data

Browse and download datasets from  
contributors all over the world.



## Share Data

Upload your data and collaborate with your  
colleagues or share it with users around the  
world.



## Use Data

Use our available pipelines to process any data  
on the site.

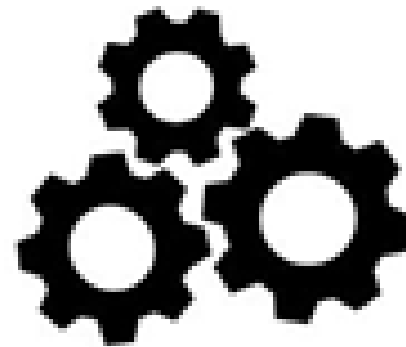
F<sub>indable</sub>



A<sub>ccessible</sub>



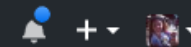
I<sub>nteroperable</sub>



R<sub>eusable</sub>





[Pull requests](#) [Issues](#) [Marketplace](#) [Explore](#)[psych-ds](#) / [psych-DS](#)[Unwatch](#)

11

[Unstar](#)

15

[Fork](#)

1

[Code](#)[Issues](#) 14[Pull requests](#) 0[Projects](#) 4[Wiki](#)[Insights](#)

Welcome to Psych-DS! If this is your first time visiting a Github repository, scroll on down to the README (below the repository files.) Psych-DS is a specification for psychological (and maybe other social science?) datasets - JSON metadata, predictable directory structure, and machine-readable specifications for tabular datasets

[25 commits](#)[1 branch](#)[0 releases](#)[2 contributors](#)Branch: [master](#)[New pull request](#)[Create new file](#)[Upload files](#)[Find file](#)[Clone or download](#)

mekline added issue links

Latest commit 6461d47 19 days ago

[CODE\\_OF\\_CONDUCT.md](#)

Rename ContributorCodeofConduct.md to CODE\_OF\_CONDUCT.md

26 days ago

[CONTRIBUTING.md](#)

stub

a month ago

[README.md](#)

added issue links

19 days ago

[README.md](#)

## psych-DS

Welcome to the Psych Data Standard project! (Maybe we'll have a snappier name in the future.) This is an in-progress community attempt to define a standard way of formatting and documenting scientific datasets. It started as a hackathon at [SIPS 2018](#). Psych-DS incorporates a few types of existing recommendations for organizing our work ([well-formatted spreadsheets](#), [data dictionaries](#), and [sensible folder structure](#)) into a technical specification - a series of requirements for file structure and format that constitute a standard machine-readable template.

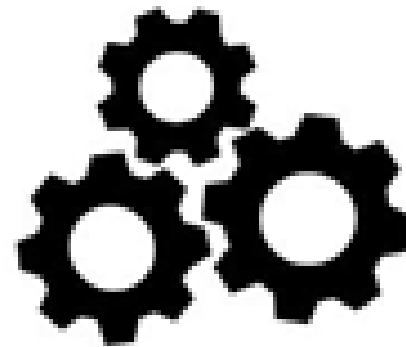
<https://github.com/psych-ds/psych-DS>



Picture credit: Bastian Greshake Tzovaras

<https://foundation.mozilla.org/en/opportunity/mozilla-open-leaders>

F<sub>indable</sub> A<sub>ccessible</sub> I<sub>nteroperable</sub> R<sub>eusable</sub>



**Community** built standards

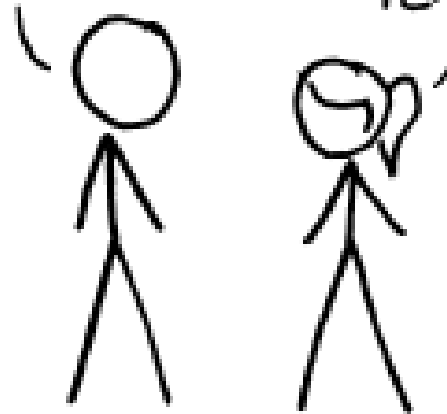


# HOW STANDARDS PROLIFERATE:

(SEE: A/C CHARGERS, CHARACTER ENCODINGS, INSTANT MESSAGING, ETC.)

SITUATION:  
THERE ARE  
14 COMPETING  
STANDARDS.

14?! RIDICULOUS!  
WE NEED TO DEVELOP  
ONE UNIVERSAL STANDARD  
THAT COVERS EVERYONE'S  
USE CASES.



SOON:

SITUATION:  
THERE ARE  
15 COMPETING  
STANDARDS.



# Call for community review of BIDS

BIDS is a standard for organizing and describing MRI data sets, that uses file formats compatible with existing software, unifies the majority of practices already common in the field, and captures the metadata necessary for most common data processing operations.

The 1st standard has been submitted for endorsement by INCF and we are now seeking your feedback on whether the **Brain Imaging Data Structure** (BIDS) should be endorsed as an INCF standard. We welcome your feedback through [the INCF F1000 channel](#) or [this Google doc](#) by October 31st. There you will also find the full submission document. In this blog post by Maryann Martone, you can read about the "[The importance of community feedback in the INCF standards and best practices endorsement process](#)".



INCF provides a community platform for promoting and supporting efforts to move global neuroscience towards **the FAIR principles** through the creation and, more importantly, the adoption of **standards and best practices (SBPs)** for how different types of data should be acquired, organized and published. Towards this end, **INCF has adopted a formal procedure**, based on those used by national and international standards bodies like the W3C, to allow the neuroscience community to review and endorse SBPs for neuroscience. This procedure will help collate information on available SBPs, but also provide a mechanism whereby these are formally evaluated to make sure they are able to be used and meet the needs of the neuroscience community.

## Related

### INCF endorses community standards and best practices

Starting in 2018, we are further developing our aim to promote the neuroinformatics field and advance data reuse and reproducibility in brain research by implementing a **process for endorse**

### Standards and best practices

INCF supports the development of community standards and best practices for neuroscience that promote the FAIR principles.

# Appendix I: Contributors

Legend (source: <https://github.com/kentcdodds/all-contributors>)

| Emoji | Represents                                                                  |
|-------|-----------------------------------------------------------------------------|
| 💬     | Answering Questions (on the mailing list, NeuroStars, GitHub, or in person) |
| 🐛     | Bug reports                                                                 |
| 📝     | Blogposts                                                                   |
| 💻     | Code                                                                        |
| 📖     | Documentation and specification                                             |
| 🧠     | Design                                                                      |
| 💡     | Examples                                                                    |
| 📅     | Event Organizers                                                            |
| 💰     | Financial Support                                                           |
| 🔍     | Funding/Grant Finders                                                       |
| 🤔     | Ideas & Planning                                                            |
| 🖥️    | Infrastructure (Hosting, Build-Tools, etc)                                  |
| 🔧     | Plugin/utility libraries                                                    |
| 👁️    | Reviewed Pull Requests                                                      |
| 🔩     | Tools                                                                       |
| 🌐     | Translation                                                                 |
| ⚠️    | Tests                                                                       |
| ✅     | Tutorials                                                                   |
| 📢     | Talks                                                                       |
| 📺     | Videos                                                                      |

Thank you!

Email: [kw401@cam.ac.uk](mailto:kw401@cam.ac.uk)

BIDS website: <http://bids.neuroimaging.io>

Psych-DS: <https://github.com/psych-ds/psych-DS>

The following individuals have contributed to the Brain Imaging Data Structure ecosystem (in alphabetical order). If you contributed to the BIDS ecosystem and your name is not listed, please add it.

- Stefan Appelhoff
  - Tibor Auer
  - Sylvain Baillet
  - Elizabeth Bock
  - Eric Bridgeford
  - Teon L. Brooks
  - Suyash Bhogawar
  - Vince D. Calhoun
  - Alexander L. Cohen
  - R. Cameron Craddock
  - Samir Das
  - Alejandro de la Vega
  - Eugene P. Duff
  - Elizabeth DuPre
  - Eric A. Earl
  - Anders Eklund
  - Franklin W. Feingold
  - Guillaume Flandin
  - Remi Gau
  - Satrajit S. Ghosh
  - Tristan Glatard
  - Mathias Goncalves
  - Krzysztof J. Gorgolewski
  - Alexandre Gramfort
  - Yaroslav O. Halchenko
  - Daniel A. Handwerker
  - Michael Hanke
  - Michael P. Harms
  - Richard N. Henson
- Dora Hermes
  - Katja Heuer
  - Chris Holdgraf
  - International Neuroinformatics Coordinating Facility
  - Mainak Jas
  - David Keator
  - James Kent
  - Gregory Kiar
  - Pamela LaMontagne
  - Kevin Larcher
  - Laura and John Arnold Foundation
  - Xiangrui Li
  - Vladimir Litvak
  - Dan Lurie
  - Camille Maumet
  - Christopher J. Markiewicz
  - Jeremy Moreau
  - Zachary Michael
  - Michael P. Milham
  - Henk Mutsaerts
  - National Institute of Mental Health
- Dmitry Petrov
  - Russell A. Poldrack
  - Jean-Baptiste Poline
  - Vasudev Raguram
  - Ariel Rokem
  - Gunnar Schaefer
  - Jan-Mathijs Schoffelen
  - Vanessa Sochat
  - Francois Tadel
  - Roberto Toro
  - William Triplett
  - Jessica A. Turner
  - Joseph Wexler
  - Kirstie Whitaker
  - Gaël Varoquaux
  - Tal Yarkoni
- B. Nolan Nichols
  - Thomas E. Nichols
  - Dylan Nielson
  - Guiomar Niso
  - Robert Oostenveld
  - Patrick Park
  - Dianne Patterson
  - John Pellman
  - Cyril Pernet