Clinica

Software platform for clinical neuroimaging studies

Clinica is a software platform for clinical research studies involving patients with neurological and psychiatric diseases and the acquisition of multimodal data (neuroimaging, clinical and cognitive evaluations, genetics...), most often with longitudinal follow-up.

The development of Clinica was initiated by the ARAMIS Lab at the Paris Brain Institute.

QUICK START

We are very pleased to announce that

Clinica 0.5.3 is out!

RELEASE NOTES

INSTALLATION

What are the main features of Clinica?

• Complex processing pipelines involving different software packages.
• Integration between feature extraction and statistics / machine learning.
• Standardized input/output data structures.
• Conversion of publicly available datasets (ADNI, AIBL, OASIS, NIFD) to BIDS.

Why should I install Clinica?

In short: **to make your life easier!**

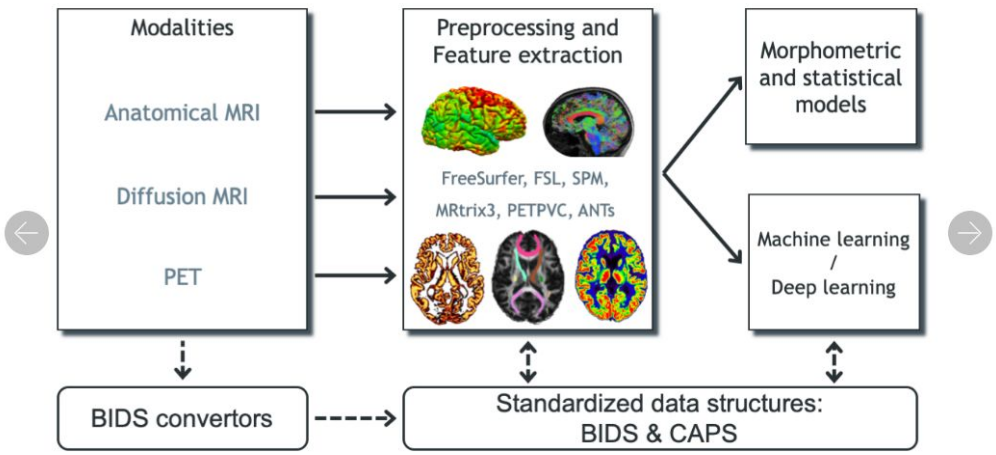
With Clinica you can:
• easily share data and results within your institution and with external collaborators;
• make your research more reproducible;
• spend less time on data management and processing.

Who are the intended users of Clinica?

Clinica is meant for users looking for a straightforward and efficient way to process and analyze neuroimaging data, such as machine learning experts wishing to work with neuroimages or clinical fellows not familiar with image processing and analysis tools.

Which technologies underlie Clinica?

Clinica is written in Python. It uses Nipype for pipelining and combines widely-used software packages for neuroimaging data analysis (SPM, FSL, FreeSurfer, MRtrix, ...), machine learning (Scikit-learn) and the BIDS standard for data organization.
Its deep learning companion, ClinicaDL, relies on PyTorch.



Around Clinica

ClinicaDL

Framework for the reproducible processing of neuroimaging data with deep learning

Tutorial

Deep learning classification from brain MRI: Application to Alzheimer's disease

AD-DL

Framework for the reproducible evaluation of deep learning classification experiments using anatomical MRI data for the computer-aided diagnosis of Alzheimer's disease

AD-ML

Framework for the reproducible evaluation of machine learning classification experiments using anatomical MRI and PET data for the computer-aided diagnosis of Alzheimer's disease

aramis-lab / clinicadl Public

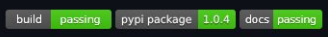
master 2 branches 22 tags Go to file Code

dependabot Bump pillow from 8.4.0 to 9.0.0 (#279) ... 506f9fd 4 days ago 1,636 commits

.jenkins/scripts	Switch to poetry to manage requirements (#250)	last month
clinicadl	Change version, prepare release v1.0.4	last month
docs	Add logo to documentation	last month
tests	Extract name (#248)	last month
.git-blame-ignore-rev	Add .git-blame-ignore-rev file to ignore massive commit when blaming	8 months ago
.gitignore	Switch to poetry to manage requirements (#250)	last month
.pep8speaks.yml	Edit rules for pep8speaks	8 months ago
.pre-commit-config.yaml	Add pre-commit and parameters for project	8 months ago
CHANGELOG	Prepare next release, edit changelog	4 months ago
Jenkinsfile	Fix agent in deploy stage [CI]	last month
LICENSE.txt	Add license	2 years ago
MANIFEST.in	Fix not found files, prepare release 0.2.0rc2	11 months ago
README.md	Edit tutorial url	last month
environment.yml	Switch to poetry to manage requirements (#250)	last month
mkdocs.yml	Add logo to documentation	last month
poetry.lock	Bump pillow from 8.4.0 to 9.0.0 (#279)	4 days ago
pyproject.toml	Change version, prepare release v1.0.4	last month

ClinicaDL

Framework for the reproducible processing of neuroimaging data with deep learning methods



Documentation | Tutorial | Forum

About the project

This repository hosts ClinicaDL, the deep learning extension of Clinica, a python library to process neuroimaging data in BIDS format.

> **Disclaimer**: this software is **under development**. Some features can change between different releases and/or commits.

To access the full documentation of the project, follow the link https://clinicadl.readthedocs.io/. If you find a problem when using it or if you want to provide us feedback, please open an issue or write on the forum.

Getting started

ClinicaDL currently supports macOS and Linux.

We recommend to use `conda` or `virtualenv` for the installation of ClinicaDL as it guarantees the correct management of libraries depending on common packages:

```
conda create --name ClinicaDL python=3.7
```

README.md

Tutorial

Visit our hands-on tutorial web site to start using **ClinicaDL** directly in a Google Colab instance!

Related Repositories

- Clinica: Software platform for clinical neuroimaging studies
- AD-DL: Convolutional neural networks for classification of Alzheimer's disease: Overview and reproducible evaluation
- AD-ML: Framework for the reproducible classification of Alzheimer's disease using machine learning

About

Framework for the reproducible processing of neuroimaging data with deep learning methods

clinicadl.readthedocs.io/

python deep-learning pytorch medical-imaging neuroimaging convolutional-neural-network brain-imaging alzheimer-disease

Readme
MIT License
100 stars
7 watching
40 forks

Releases 14

ClinicaDL 1.0.4 Latest
on 6 Dec 2021

+ 13 releases

Packages

No packages published

Contributors 9

Languages

Python 99.7% Shell 0.3%