

XREGI

 Open in Colab  Made with Python  pypi package  0.4

This is a python package for registering x-ray images and CT scans. It is based on the [xReg](#), a C++ library for medical image registration, and [synthex](#), a python package for synthetic x-ray imaging.

Third-party libraries

Before you start, please make sure you have all the dependencies installed. The following libraries are required:

- [Total Segmentator](#)
- [xReg](#)
- [SyntheX](#)

Install TotalSegmentator

total segmentator can be installed through pip

```
pip install TotalSegmentator
```

Install xReg

xReg is a C++ library for medical image registration. It is used as the backend of xregi. To install xReg, please follow the instructions in the [README.md of xreg](#)

On other environments, such as Windows, MacOS and Ubuntu, you may need to install xreg aside according to your system. The detailed information can be found at the [Building](#) section in the README.md of xreg.

Install SyntheX

Synthex will be installed along with xregi. If you want to install it separately, here is the installation for SyntheX:

```
git clone https://github.com/arcadelab/SyntheX.git
cd /SyntheX
conda install .
```

Xregi Installation Guide

Install through pip

On ubuntu 20.04, simply install this package using pip

```
pip install xregi
```

Install from source

On ubuntu 20.04, download the source code and install it under xregi path

```
git clone https://github.com/shez12/xregi
git checkout master
```

Fetch the source data and example images from [here](#) or

```
#download data.zip
wget --load-cookies /tmp/cookies.txt "https://docs.google.com/uc?
export=download&confirm=$(wget --quiet --save-cookies /tmp/cookies.txt --keep-
session-cookies --no-check-certificate 'https://docs.google.com/uc?
export=download&id=1wjrxNE6B0pX3IooGxwC_cjf4n8MhxU1p' -O- | sed -rn 's/.confirm=
([0-9A-Za-z_]+).*\1\n/p')&id=1wjrxNE6B0pX3IooGxwC_cjf4n8MhxU1p" -O data.zip && rm -
rf /tmp/cookies.txt

#unzip data.zip
cd Downloads/
unzip data.zip
```

Usage

Before using xregi, you need to move the data folder to xregi directory.

```
mv data xregi/
```

xregi supports command line interactions and API. To use the API,

```
import xregi

reg_ = Registration2D3D().load()

reg_.solve()

...
```

Contributors

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