



DICOMViz

Python based
Dicom Images
Visualizer



HELLO!

I am Pablo

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1.

WHAT IS DicomViz ?

Let's start with
a general
overview

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DICOMViz, a modular, expandable
and lightweight portable
DICOM viewer.



FEATURES

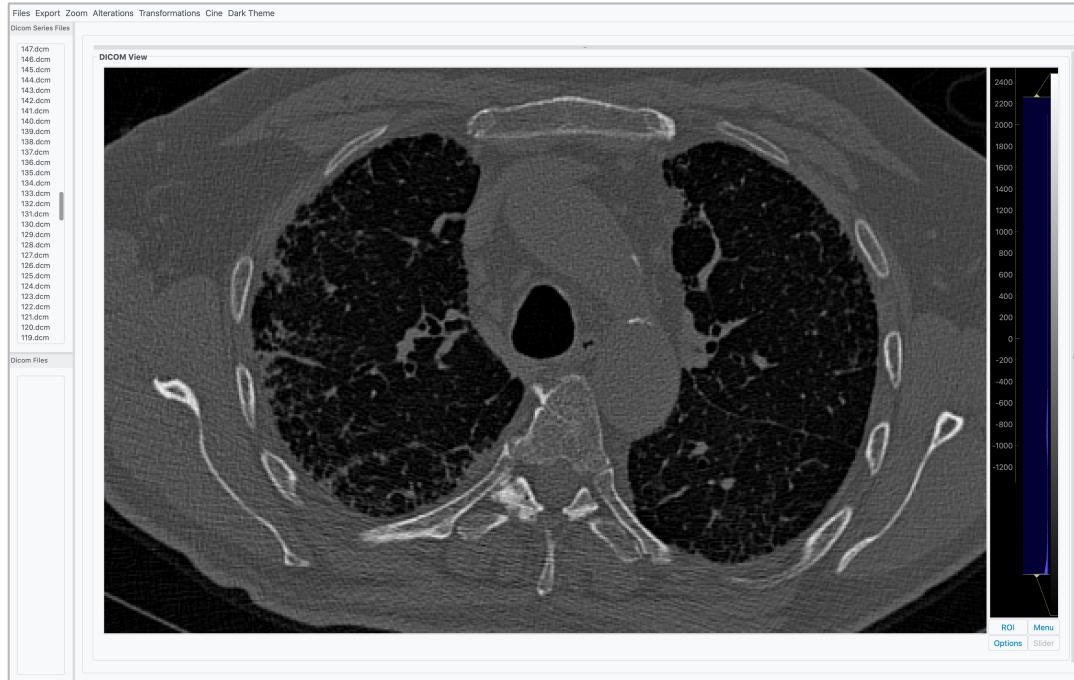
Let's see together some of
the **DicomViz** capabilities.



IMAGE VISUALIZATION

Support for:

- ▶ Dicom files
- ▶ Dicom series

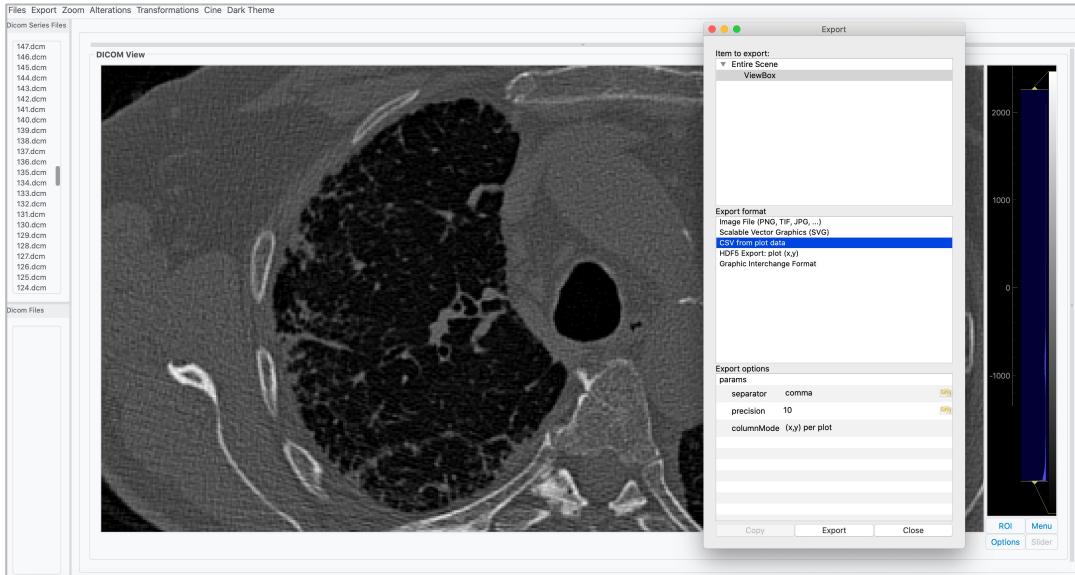


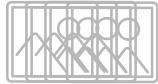


EXPORT

Export to:

- ▶ **PNG file**
- ▶ **JPEG file**
- ▶ **TIFF file**
- ▶ **SVG file**
- ▶ **GIF of series**
- ▶ **more...**

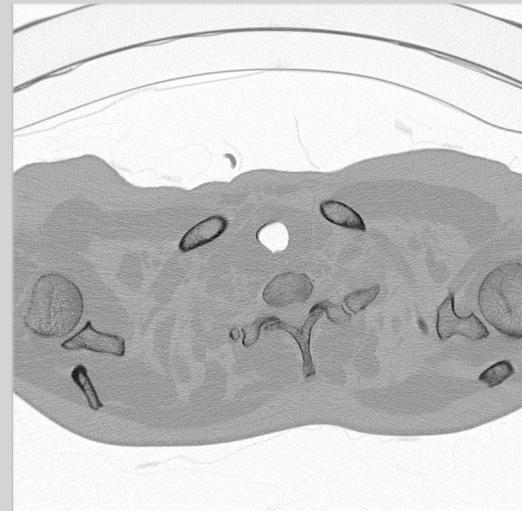
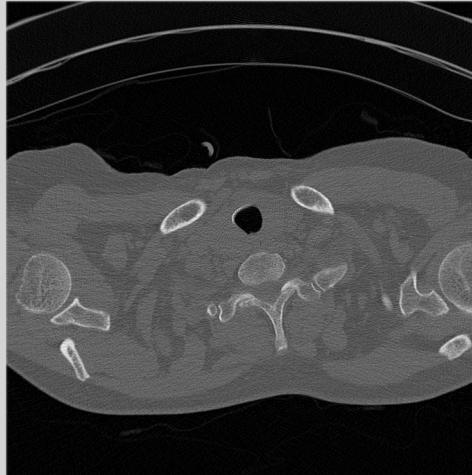




GIF EXPORT

Series images can be exported as gifs.

Export of altered images is supported.

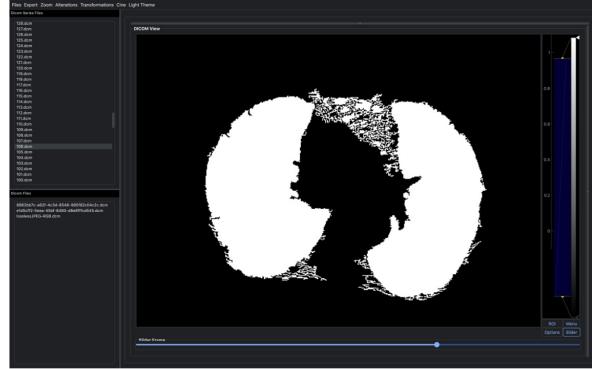


ALTER DICOMS

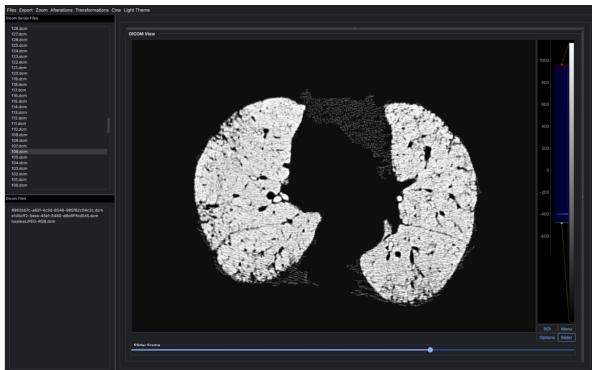
Several
combinations
available.



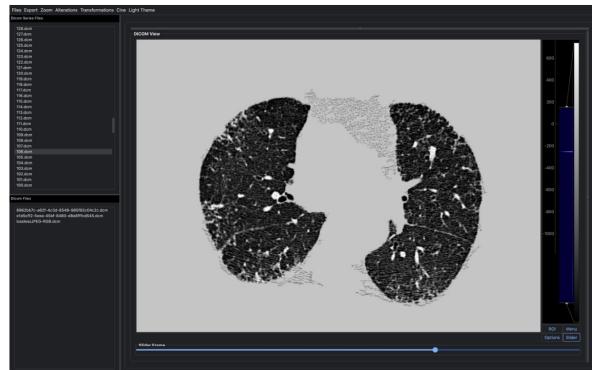
(a) Negative image



(b) Lungs mask



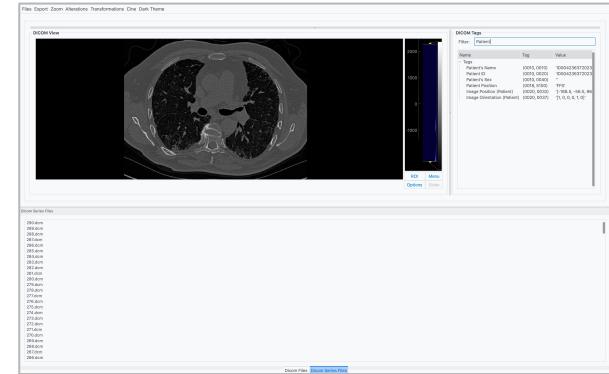
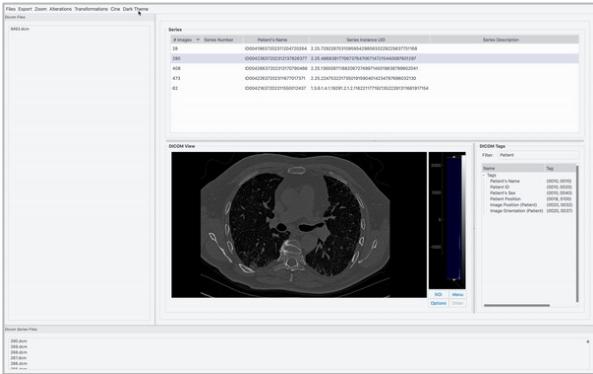
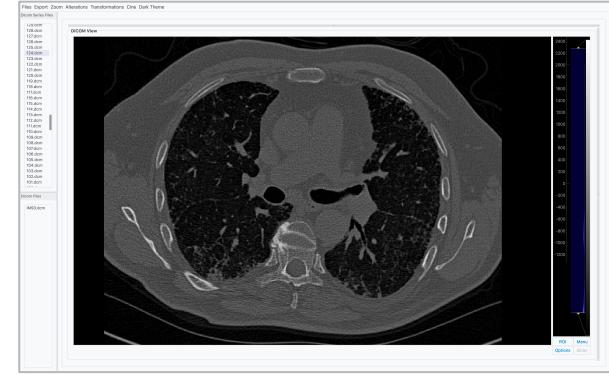
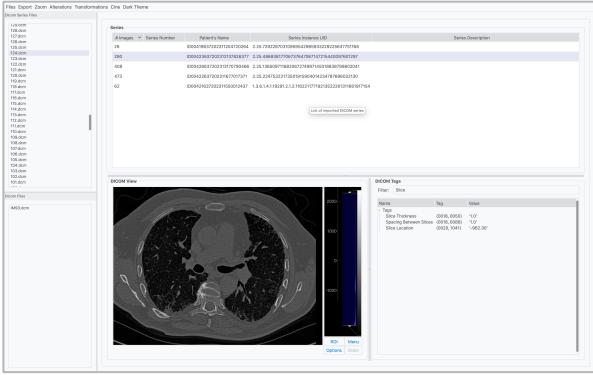
(c) Segmented image with lungs mask



(d) Negative segmented image with lungs mask

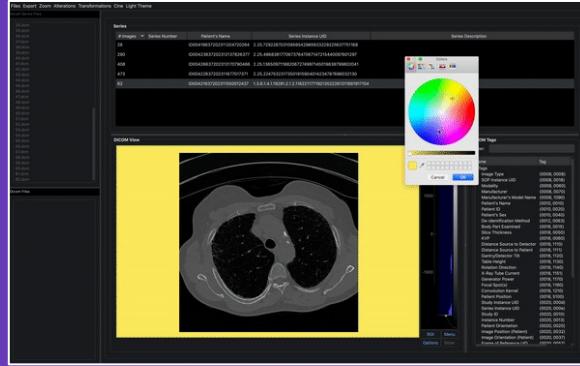
CUSTOMIZE LAYOUT

Focus on your needs.

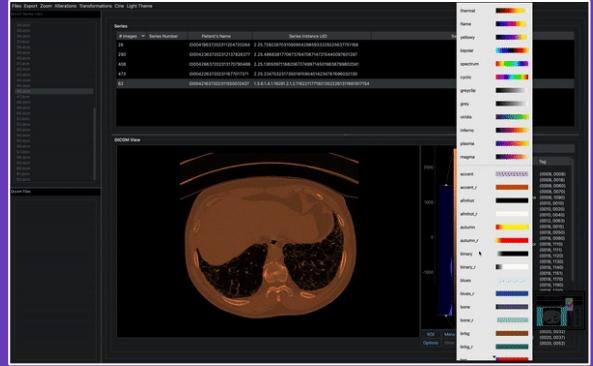


MORE FUNCTIONALITIES

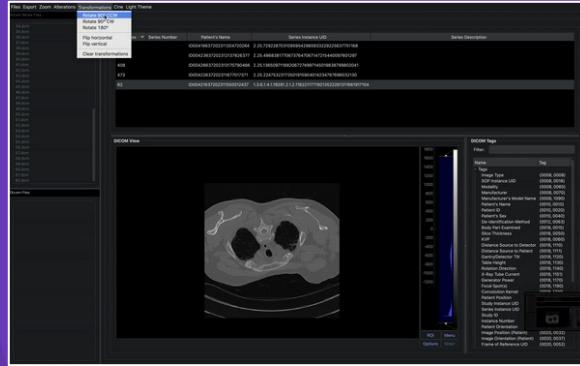
To get your stuff
done.



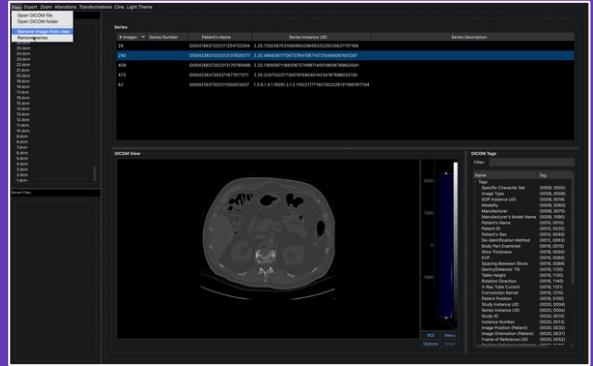
Change background color



Change color map



Rotate and flip images



Remove loaded files

2.

How it has been done?

Let's deep into
technical part

ALL TIME CLASSICS



DicomViz building blocks
are popular and updated
libraries.

PyDicom



NumPy



Qt Designer



PyQt



PyQtGraph



PyDicom



Pure Python package for
working with DICOM files.
Read, write, modify
DICOM data.

PyDicom



NumPy



Qt Designer



PyQt



PyQtGraph



NumPy



Fundamental package for scientific computing, used to manipulate Dicom data arrays.

PyDicom



NumPy



Qt Designer



PyQt



PyQtGraph



Qt Designer

Tool for designing and building GUIs with Qt Widgets.

PyDicom 

NumPy 

Qt Designer 

PyQt 

PyQtGraph 

PyDicom



NumPy



Qt Designer



PyQt



PyQtGraph



PyQt



Python binding for the
Qt framework.
The core element of
DicomViz GUI

PyQtGraph



Graphics and GUI library
built on [PyQt](#) and [Numpy](#).
Core element for
viewing images in
DicomViz

PyDicom



NumPy



Qt Designer



PyQt



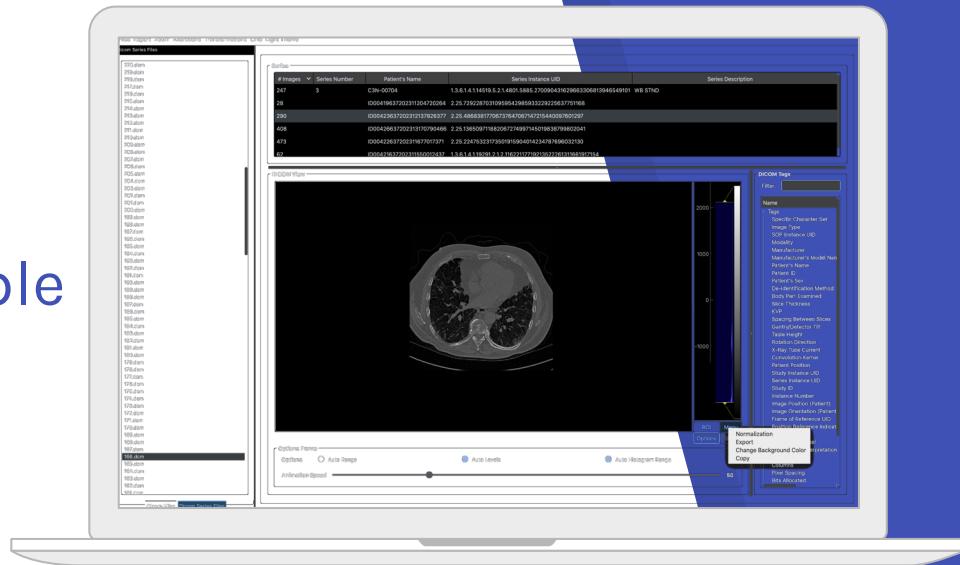
PyQtGraph



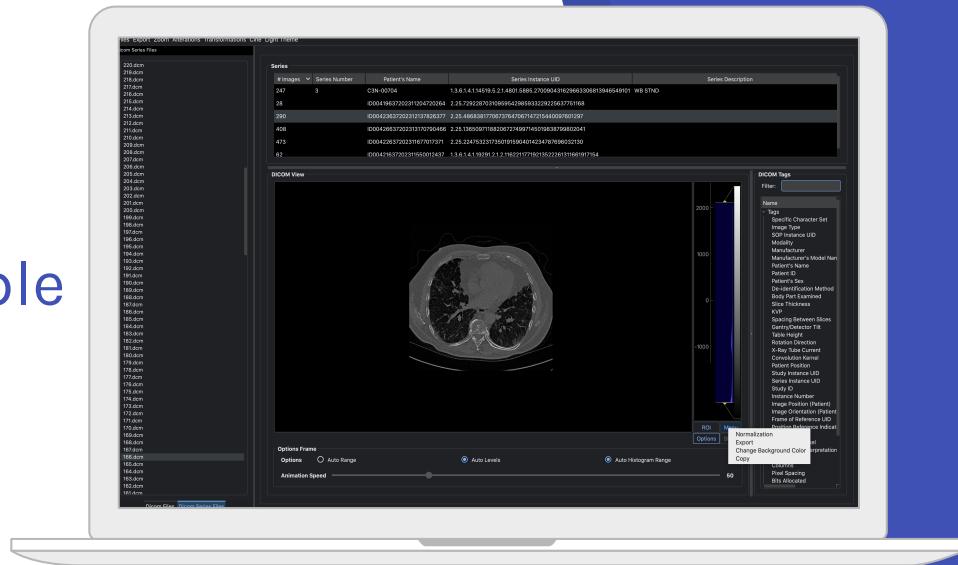
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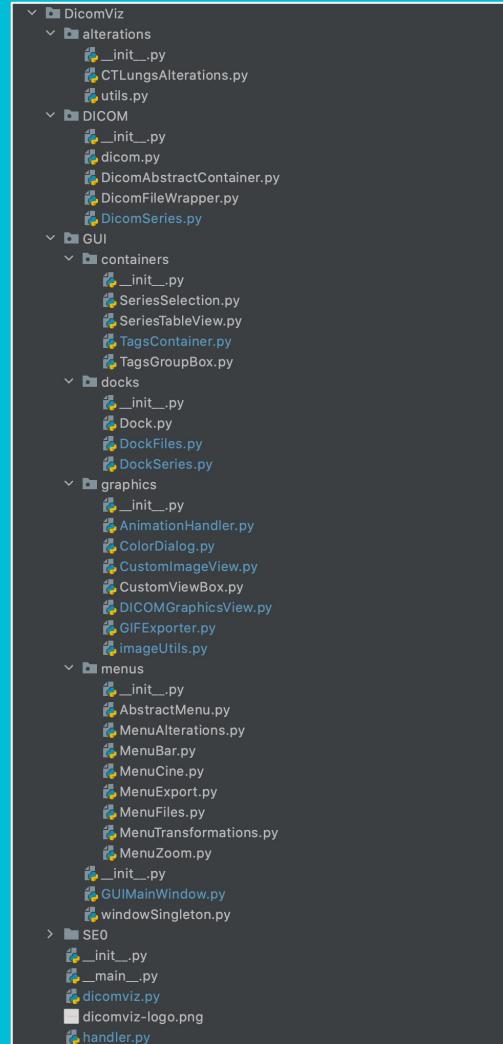


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MODULARITY

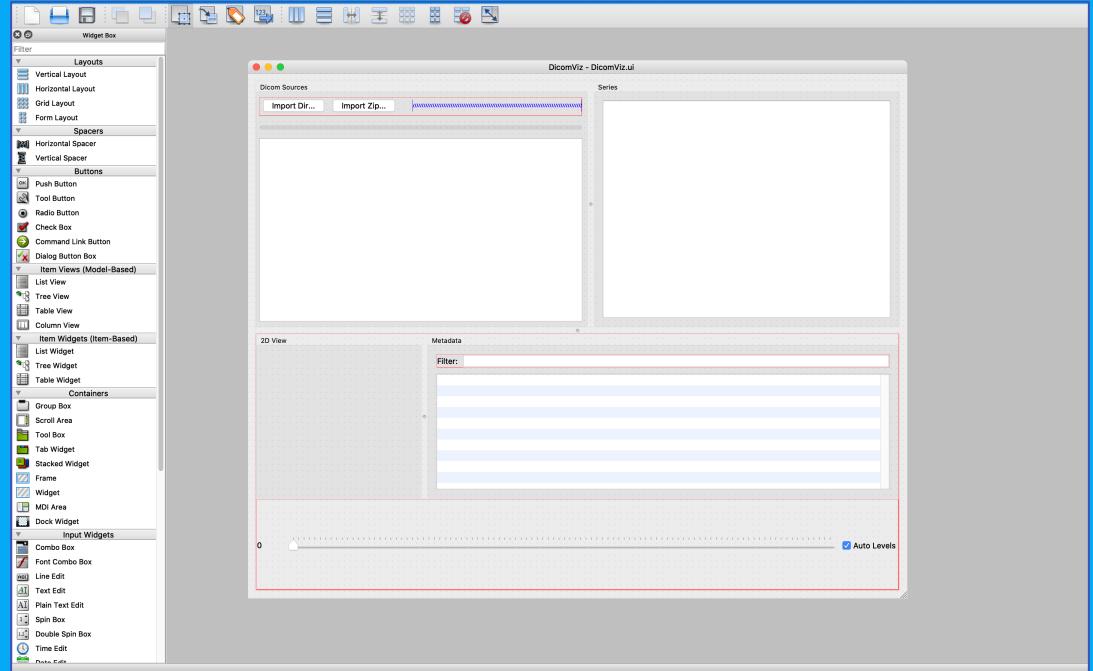
Following
object oriented
principles.



Project modules

EXPANDABILITY

Following
object oriented
principles.



Many QtWidgets available



THANKS!

Pablo Giaccaglia