Objective 1 [15%]   /10

Load RadCTTACEomics_DDDD CT and segmentation

- ☐ Both images are loaded with PyDicom, and their corresponding headers have been studied.
- ☐ The slices of the CT image contain only a single acquisition.
- ☐ The segmentation image is resliced according to the dicom headers.
- ☐ The four regions of interest appear on a segmentation (i.e. label image).

Rotating MIP

- ☐ At least one Maximum Intensity Projection has been created.
- ☐ The image and the regions are both clearly identifiable: colormaps have been correctly used, alpha fusion is used.
- ☐ An interactive animation with at least 16 projections has been showed.

Objective 2 [15%]   /10

Segmentation

- ☐ The centroid and bounding box have been calculated.
- ☐ A segmentation algorithm has been implemented, and it uses either the centroid or the bounding box.
- ☐ The segmentation algorithm works in volumetric 3D images, rather than on single slices.
- ☐ The segmentation algorithm extracts the tumoral region up to its borders.

Assessment

- ☐ Both the CT image and automatically segmented mask have been visualized together.
- ☐ Both the provided and automatically segmented masks have been visualized together, and can be easily compared.
- ☐ Numerical values have been implemented to measure the correctness of the automatic segmentation.

Objective 3 [15%]   /10

Image coregistration

- ☐ A rigid motion has been implemented.
- ☐ The initial parameters are adequate.
- ☐ A loss function has been implemented.
- ☐ An optimizer has been successfully used to find the optimal parameters of a rigid motion.
- ☐ The correctness of the coregistration has been verified with visualizations.

Mask and assessment

- ☐ The mask has been transformed into the input space.
- ☐ The inverse transformation has been explicitly found.
- ☐ Both the input CT image and the transformed liver mask have been visualized together.
- ☐ Numerical values have been implemented to measure the correctness of the coregistration process.

Submission [20%]   /10

Document

- ☐ Written expression is correct and accurate.
- ☐ Covers all the objectives.
- ☐ Shows figures of images/ROIs when necessary.
- ☐ Includes discussions on why certain approaches were preferred over others.
- ☐ Includes a relevant discussion of the findings and shortcomings of the project.

Code

- ☐ Is publicly accessible
- ☐ It contains a Readme and is easy to follow