

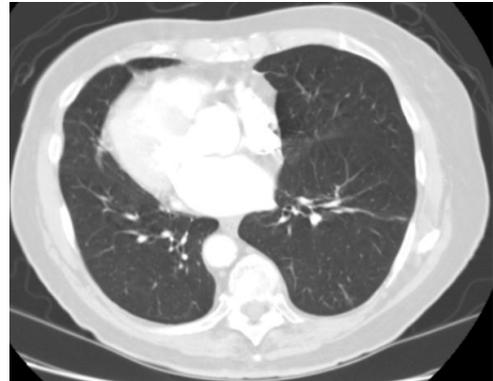
Hacking Health AI Challenge

Description

Medical imaging is one of the prime sources for machine learning source data. There is a consensus that it will be of great benefit to tackle computer aided diagnosis through machine learning. In particular, the recent developments in deep machine learning spurred great hope of achieving that goal. For this challenge we are interested in the content of radiological imaging, specifically if deep learning can identify the organs visible in a particular image.

Challenge

We provide you with a dataset of 120 chest CT volumes in [NiftI-format](#). The dataset consists of 120 cases and annotations (ground truth) of the organ positions. Your goal will be to build a model, that recognizes organs in the chest and upper abdomen, namely the heart, lung, thyroid gland, liver and spleen. The model should then label the [axial](#) (see the example on the right) slices in test dataset and provide the range of slices which the organ can be seen. At Sunday you will receive additional 30 cases without annotation to test the performance of your model.



Criteria for Winning

On Sunday you can submit your results for the test **ONCE** to healthhackathonbhi@gmail.com. The results for the remainder of the cases will not be sent back to you. The winning team will be the one with most accurate annotation of the organs in the hidden test cases. Please note that we will normalize the accuracy for the organ size, so a correct annotation of smaller organs is as important as the larger ones.

Submission File

For each patient id in the test set, you must submit the number of slices where each organ can be seen on. The file should have a header and be in the same format as the annotations we provide to you for training (sample data):

```
# File, Heart_from, Heart_to, Lung_from, Lung_to, Thyroid_from,
Thyroid_to, Liver_from, Liver_to, Spleen_from, Spleen_to
0.nii, 120, 200, 10, 210, 5, 15, 180, 220, 190, 220
1.nii, ...
```

Rules

The training cases can be used in any way the participants deem necessary for the training of their systems. You can use the provided annotation and/or add your own data as you seem fit. The test cases, however need to be annotated without any further human interaction. All code must be provided and run on our machines.

Acknowledgements

The data for the test cases was prepared by the [The Cancer Imaging Archive \(TCIA\)](#) as part of the Lung Image Database Consortium image collection (LIDC-IDRI).