


Explore MRI data

 **Video:** Medical Image Segmentation
51 sec






 **Lab:** Explore MRI data
1h


Image segmentation


 **Video:** MRI Data and Image Registration
3 min


 **Video:** Segmentation
3 min


 **Lab:** Get a sub section
1h


 **Reading:** Convolutional Neural networks
10 min

 **Video:** 2D U-Net and 3D U-Net
2 min


 **Reading:** More about U-Net (Optional)
10 min


 **Lab:** Implement U-Net
1h


 **Video:** Data augmentation for segmentation
2 min

 **Video:** Loss function for image segmentation
3 min

Practical considerations

 **Video:** Different Populations and Diagnostic Technology
1 min

 **Video:** External validation
2 min

 **Video:** Measuring Patient outcomes
3 min

Quiz week 3

Programming: 3D Image Segmentation

Summary of AI for Medical Diagnosis



Convolutional Neural networks

One of the recommended prerequisites for this course is a previous understanding of convolutional neural networks (CNNs). If you are not yet familiar with CNNs, you can still complete this course, as you will not be graded on your ability to build a convolutional neural network from its individual components.

If you would like to get a foundation in CNNs, we recommend taking the [Convolutional Neural Networks course](#).

For a quick refresher, pay attention to the concepts such as filters, padding, strides, and pooling layers.

Please note, even if you do not have a complete foundation in CNNs, you should still be able to complete this course. In practice, since you will normally use a pre-trained model, this course has you practice using a pre-trained model. You will implement the steps before and after the model building and training, such as data preparation, implementing an appropriate loss function, as well as evaluating your models' performance.

✓ Complete

Go to next item

