coursera

Lab Help

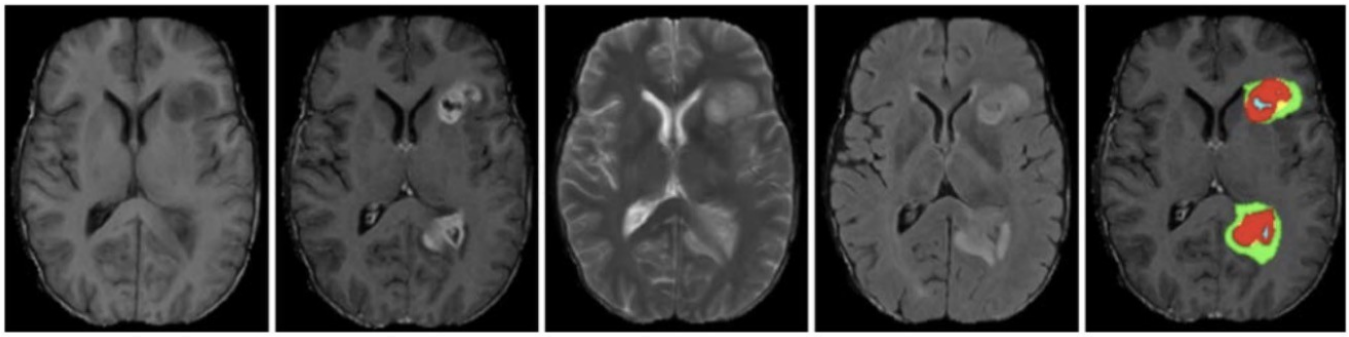

Image Source (https://medium.com/stanford-ai-for-healthcare/its-a-no-brainer-deep-learning-for-brain-mr-images-f60116397472)

Brain Tumor Auto-Segmentation for Magnetic Resonance Imaging (MRI)

Welcome to the final part of the "Artificial Intelligence for Medicine" course 1!

You will learn how to build a neural network to automatically segment tumor regions in brain, using MRI (Magnetic Resonance Imaging (https://en.wikipedia.org/wiki/Magnetic_resonance_imaging)) scans.

The MRI scan is one of the most common image modalities that we encounter in the radiology field. Other data modalities include:

- Computer Tomography (CT) (https://en.wikipedia.org/wiki/CT_scan),
- Ultrasound (https://en.wikipedia.org/wiki/Ultrasound)
- X-Rays (https://en.wikipedia.org/wiki/X-ray).

In this assignment we will be focusing on MRIs but many of our learnings applies to other mentioned modalities as well. We'll walk you through some of the steps of training a deep learning model for segmentation.

You will learn:

- What is in an MR image
- Standard data preparation techniques for MRI datasets
- Metrics and loss functions for segmentation
- Visualizing and evaluating segmentation models

Outline