Validation Plan

Intended use of the product: Support radiologist to Quantifying Hippocampus Volume for Alzheimer's Progression

Training data collected: The "Hippocampus" dataset from the Medical Decathlon competition. The image was cropped where only the region around the hippocampus has been cut out. Algorithms that crop rectangular regions of interest are quite common in medical imaging.

Labels training data: Radiologists from Udacity label the data after the images was cropped.

Training performance of the algorithm: Dice score is 88%, Jaccard scrore is 78% on test data. For the real word performance, we select some samples and segment manually Hippocampus using 3D Slicer. Compare the volume estimated by the agent with the volume that we segment using 3D Slicer

Data the algorithm perform well and data it might not perform well The algorithm perform well if the image is T2 MRI scans of the full brain. The image is cropped where only the region around the hippocampus has been cut out. The algorithm does not perform well with other weighted image or scan method. If the image is not copped properly, it affect the algorithm perform also