

Our first approach is to collect the MRI dataset to start working on it. Next, we observe how the dataset has been provided. Because of the multimodal functionality of the dataset, we first slice up the MRI image to visualize the preferred slice to proceed on. Then the sliced image is taken to the preprocessed section.

In preprocessing part, the image is filtered. Hence, we get a noise reduced image by the help of anisotropic diffusion. Next, a wavelet transform is applied on the image to get an approximation coefficient matrix of the image. Then, a thresholding approach is done on the wavelet transformed image. Therefore, it produces an image that only contain the tumor region of the original image and vanishes the undesired part. In the next step a blob analysis is done on the image to remove the unwanted moles and to reconstruct the tumor region with original pixel values. After that, an extraction procedure is done on the image to extract the location, shape and contrast features from that image. Then, from the set of features we selected some of the feature to feed the classifier. Finally, a couple of classification model is tested on some sample image to get a better accuracy. The whole process is programmed in MATLAB.