Guide to overlaying images using Python/MatLab code

1. Open D:\willi\OneDrive\Documents\BWH\Research\GATE\Macros\Patient\_GateLab\_Results\Image Fusion.ipynb
2. Open D:\willi\OneDrive\Documents\BWH\Research\GATE\Macros\Patient\_GateLab\_Results\Patient.ipynb
3. CT images/annihilation maps/reconstructions will be opened and manually saved as png in Patient notebook while overlays will be done in Image Fusion
   1. Saving these images from python creates a white border around them, I started with CT images with this white border, so now all annihilation maps and reconstructions need this white border to be properly aligned. Could bypass this by saving these CT and subsequent other images without this border
4. After saving all images from Python after opening them and showing them using imshow function, put appropriate images through make\_mask and overlay functions. Outputs will be overlayed images.

Image reconstructions came from the following MatLab code: D:\willi\OneDrive\Documents\BWH\Research\e0404-matRad-5b175b9\test\_voxelization.m

The x, y, and z coordinates of the reconstructions were saved as 1-D text files from my TOF image reconstructor in Python and fed into the MatLab code. I had to manually set the limits of the axis of the voxelized image to match the spatial limits of the CT to properly overlay. After setting image limits, copy image, crop it to get rid of axis titles/ticks and open in Patient notebook to save and continue with overlay as described above.

Axial

Xlim = (-241,59)

Ylim = (-110,90)

Coronal

Xlim = (-242,58)

Ylim = (-33,43)