%rotate 22.5 degrees left (337.5 degrees right, or 5.89 radians)

ANOrot=zeros(size(ANO,1),floor((size(ANO,2)\*cos(5.89))-(size(ANO,3)\*sin(5.89))),floor((size(ANO,2)\*sin(5.89))+(size(ANO,3)\*cos(5.89))));

for i=1:size(ANO,1)

for j=1:size(ANO,2)

for k=1:size(ANO,3)

x=i;

y=int16((j\*cos(5.89))-(j\*sin(5.89)));

z=int16((k\*sin(5.89))+(k\*cos(5.89)));

if y<1

y==1

end

if z<1

z==1

end

ANOrot(x, y, z)=ANO(i,j,k);

end

end

end

**Example Matlab code snippet to read in the 25µm atlas and annotation volume:**

|  |
| --- |
| % Download and unzip the atlasVolume and annotation zip files    % 25 micron volume size  size = [528 320 456];  % VOL = 3-D matrix of atlas Nissl volume  fid = fopen('atlasVolume/atlasVolume.raw', 'r', 'l' );  VOL = fread( fid, prod(size), 'uint8' );  fclose( fid );  VOL = reshape(VOL,size);  % ANO = 3-D matrix of annotation labels  fid = fopen('annotation.raw', 'r', 'l' );  ANO = fread( fid, prod(size), 'uint32' );  fclose( fid );  ANO = reshape(ANO,size);    % Display one coronal section  figure;imagesc(squeeze(VOL(264,:,:)));colormap(gray);  figure;imagesc(squeeze(ANO(264,:,:)));colormap(lines);    % Display one sagittal section  figure;imagesc(squeeze(ANO(:,:,220)));colormap(lines);  figure;imagesc(squeeze(VOL(:,:,220)));colormap(gray); |

**Example Matlab code snippet to read in the 200 µm grid annotation volume:**

|  |
| --- |
| % Download and unzip the gridAnnotation zip files    % 200 micron volume size  sizeGrid = [67 41 58];  % ANOGD = 3-D matrix of grid-level annotation labels  fid = fopen( 'gridAnnotation.raw', 'r', 'l' );  ANOGD = fread( fid, prod(sizeGrid), 'uint32' );  fclose( fid );  ANOGD = reshape(ANOGD,sizeGrid);  % Display one coronal and one sagittal section  figure;imagesc(squeeze(ANOGD(34,:,:)));colormap(lines);  figure;imagesc(squeeze(ANOGD(:,:,28)));colormap(lines); |