Hi Evan,

It sounds like what you really want is a 2D map that represents the 3D brain surface as viewed from a particular angle. To get that, I’d suggest the following approach:

1. Perform a 3D rotation of the coordinates of every voxel so that your desired viewing angle is “up”. If you’re only doing a rotation along the AP axis, this is just a 2D rotation of the ML and DV coordinates, AP won’t change.
2. To find which pixels are on the dorsal surface, re-bin your ML coordinates, since your pixels are no longer nicely stacked on DV. (This is easy with discretize.m)
3. Use max to find the voxels on the dorsal surface, same as I did
4. Using those voxel identities, go back to your non-discretized coordinates for those voxel. (Not strictly necessary but will result in a nicer map)
5. You can now use the rest of my code as-is to find clean contours, separate left and right, etc.

Hope the helps. Let me know if this isn’t clear or you’re missing any code.

Good luck,

Matt