Two stage Vessel association: (“vessel\_assosiation.cpp”)

Scripting Details:

1. Preserved all the function name of Matlab version if need further collaboration developing prototypes.
2. Used few open source libraries while developing the “Two stage Vessel association” function, explaining their application in the prototype.
3. Matlab api (“mat.h” header file): To read vessel segmentation information from \*.mat files.
4. “OpenCV” to preprocess the segmentation binary images: image dilation; find close contours in the preprocessed binary images etc.
5. “Armadillo” to incorporate numerical functions such as interpolation to find equally spaced points on each closed contour.
6. “Boost” for polygon operation such as union & intersection two compute one-to-two vessel object association.
7. “Cbc” for mixed binary integer programming.
8. Once these prerequisite libraries are installed in Visual Studio, “vessel\_assosiation.cpp” can be run by giving the path of the registered images and the vessel segmentation information of \*.mat files.