Supplementary Material to: TractCloud: Registration-free Tractography Parcellation with a Novel Local-global Streamline Point Cloud Representation

Anonymous

Anonymous Organization

Table S1. dMRI acquisition parameters for five independently acquired testing datasets.

Dataset	dMRI acquisition parameters
dHCP	b = 400/1000/2600 s/mm^2; 20 volumes with b = 0 s/mm^2 , 64 volumes with b = 400 s/mm^2, 88 volumes with b = 1000 s/mm^2, 128 volumes with b = 2600 s/mm^2; TE/TR = 90/3800 ms; resolution = 1.5x1.5x1.5 mm^3
ABCD	b = 3000 s/mm^2; 1 volume with b = 0 s/mm^2, 60 volumes with b = 3000 s/mm^2; TE/TR = 88/4100 ms; resolution = 1.7x1.7x1.7 mm^3
HCP	b = 3000 s/mm^2; 18 volumes with b = 0 s/mm^2, 90 volumes with b = 3000 s/mm^2; TE/TR = 89/5520 ms; resolution = 1.25x1.25x1.25 mm^3
PPMI	b = 1000 s/mm^2; 1 volume with b = 0 s/mm^2, 64 volumes with b = 1000 s/mm^2; TE/TR = 88/7600 ms; resolution = 2x2x2 mm^3
BTP	b = 2000 s/mm^2; 1 volume with b = 0 s/mm^2, 30 volumes with b = 2000 s/mm^2; TE/TR = 98/12700 ms; resolution = 2.2x2.2x2.3 mm^3

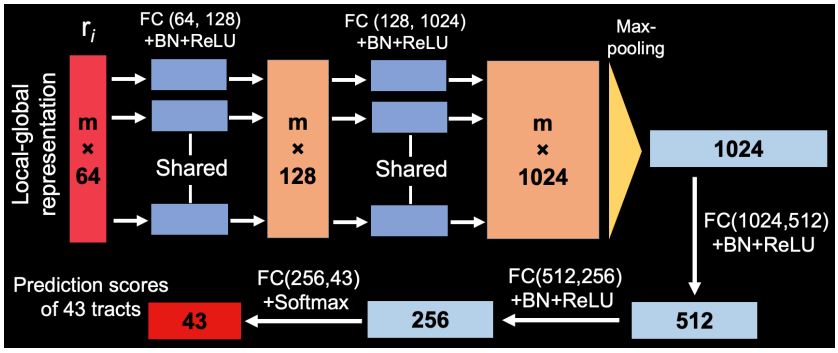

Fig. S1. The point-cloud-based network architecture of TractCloud using PointNet in our study. m is the number of points on a streamline. Abbreviations: FC, fully connected; BN, batch normalization; ReLU, rectified linear unit.

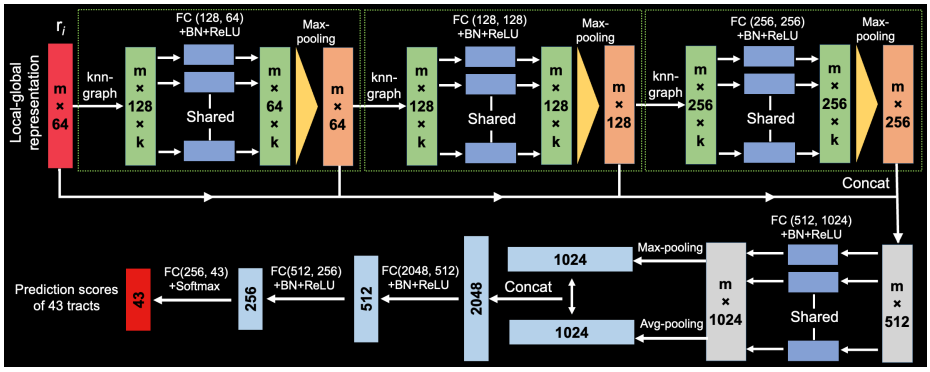

Fig. S2. The point-cloud-based network architecture of TractCloud using DGCNN in our study. m is the number of points on a streamline. Abbreviations: knn, k-nearest neighbors; FC, fully connected; BN, batch normalization; ReLU, rectified linear unit; Avg, average.