



Cell-type-specific  
networks(CSNs)



FindDiffHub()

Connectivity()

Differential hubness

Cell type deconvolution

CSNs

Disease

Healthy control

Difference in centrality

Cell type A

Cell type B



Healthy  
control  
(5 neighbors)



Disease  
(2 neighbors)



Identification of key disease genes  
for a specific cell type

● Disease-associated genes

Cell type A

Cell type B



Deconvolution of functional effect  
of disease modules into cell types  
via cell-type-specific compactness  
(A is the disease-associated cell type)

Deconvolution into cell types

# Connectivity



Celltype B

Celltype A

Hub Analysis

Neighboring  
Genes

Enrichment  
Analysis

Network Compactness  
Analysis