

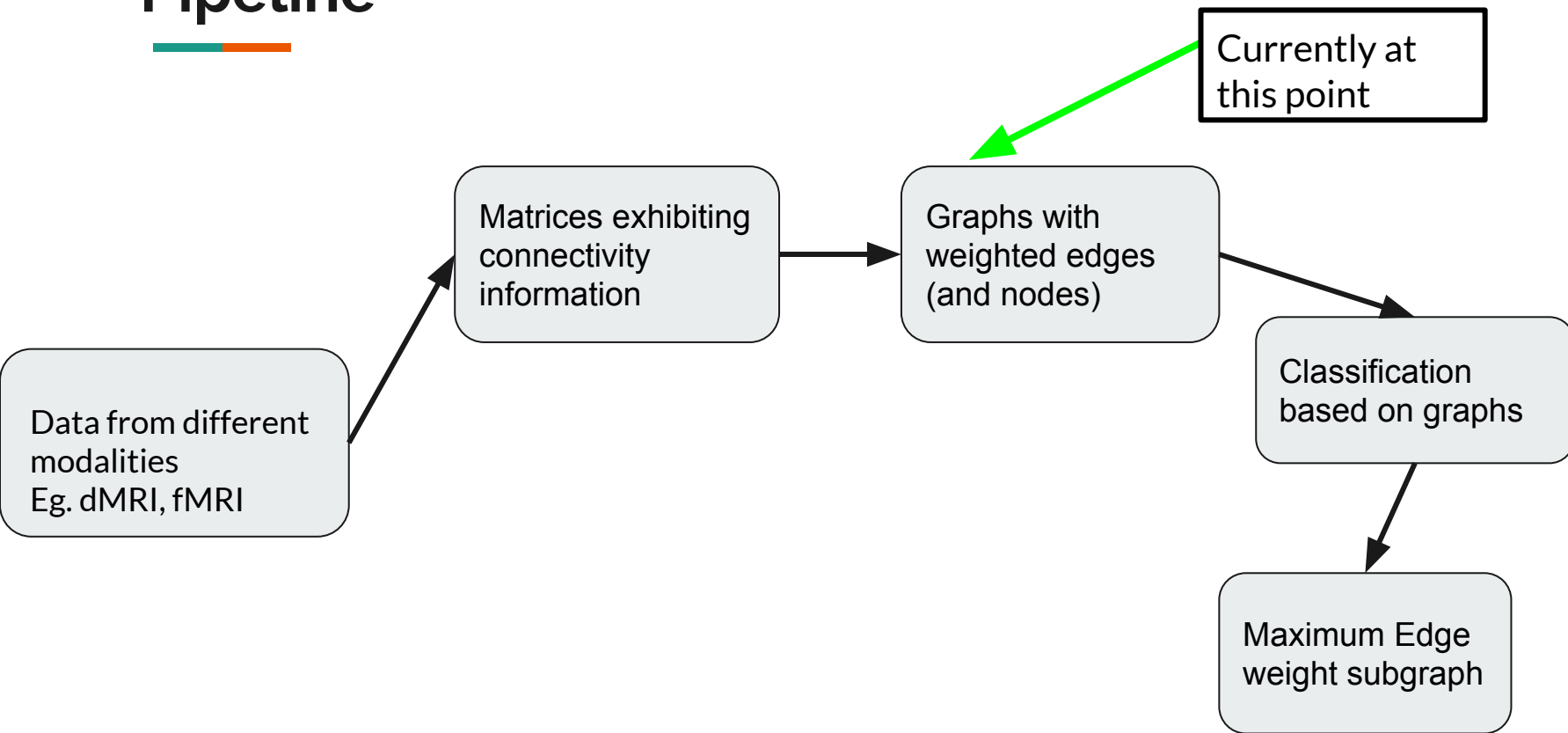


May 2020 Group Meeting

Master Thesis

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Msc. Life Science Informatics

Pipeline

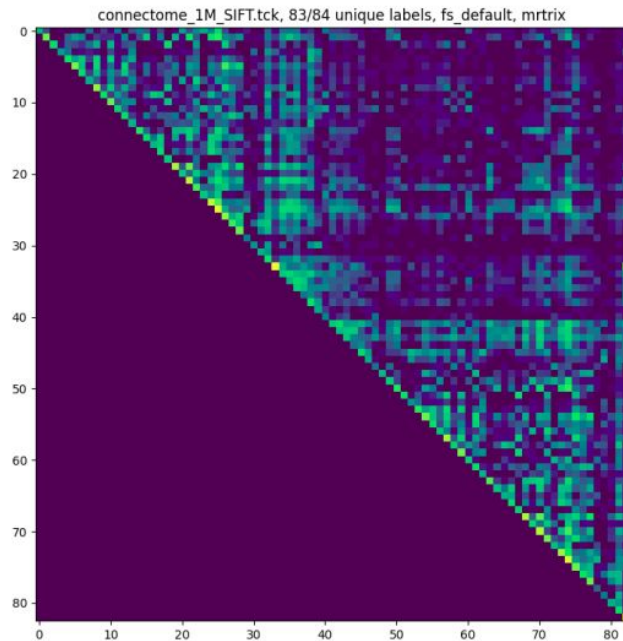
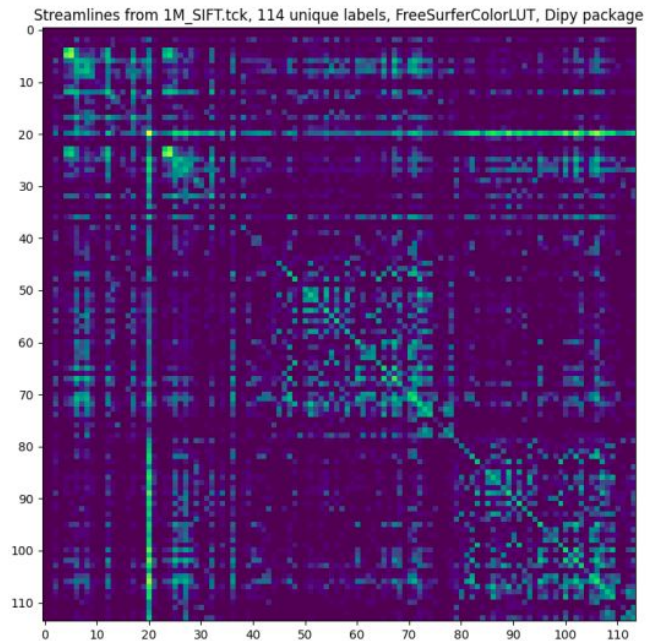


Current Progress

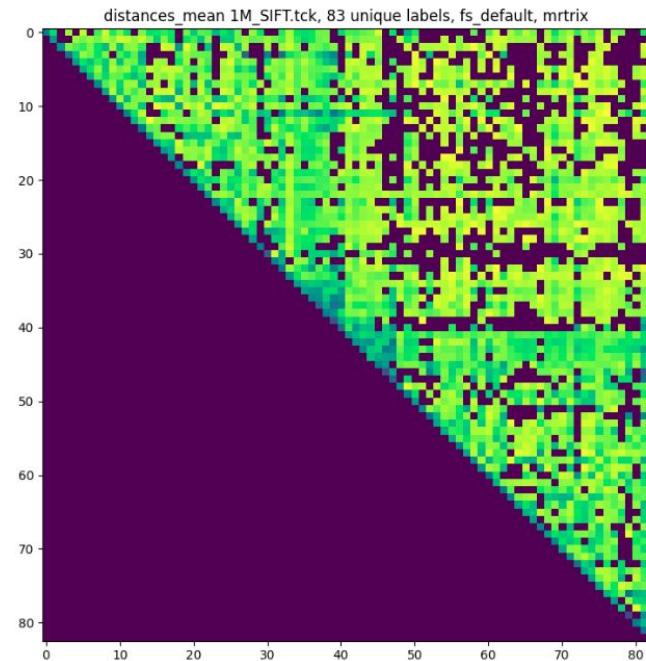
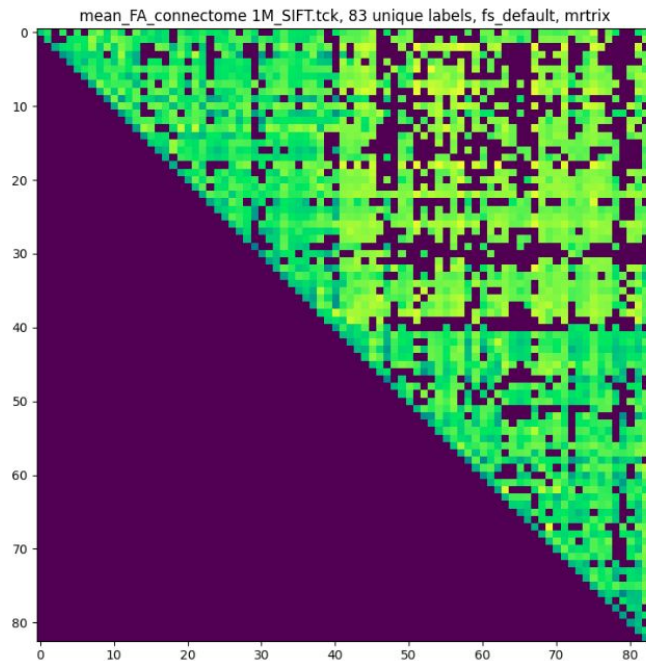


- Preprocessing pipeline running for all subjects
 - Tractography
 - Connectome generation
- Connectivity matrices
 - Mean FA between nodes
 - Mean streamline length between nodes
 - Number of streamlines between nodes
- Tractography visualisation

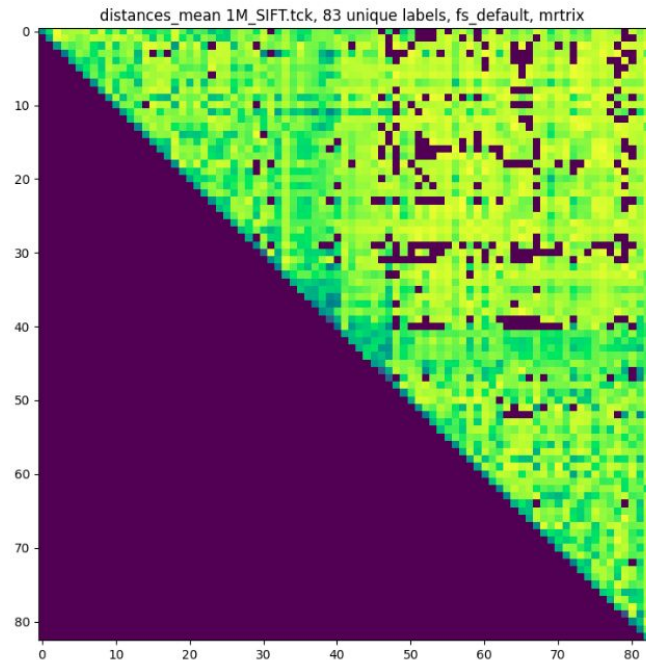
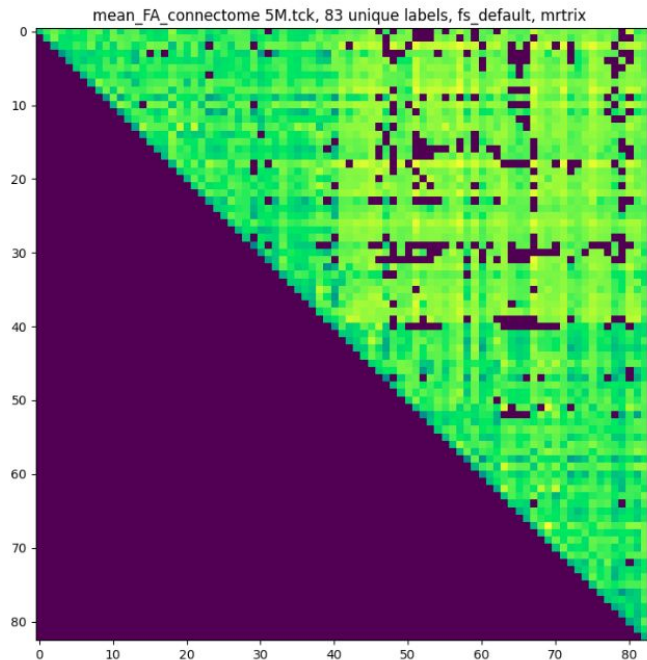
Connectivity Matrices



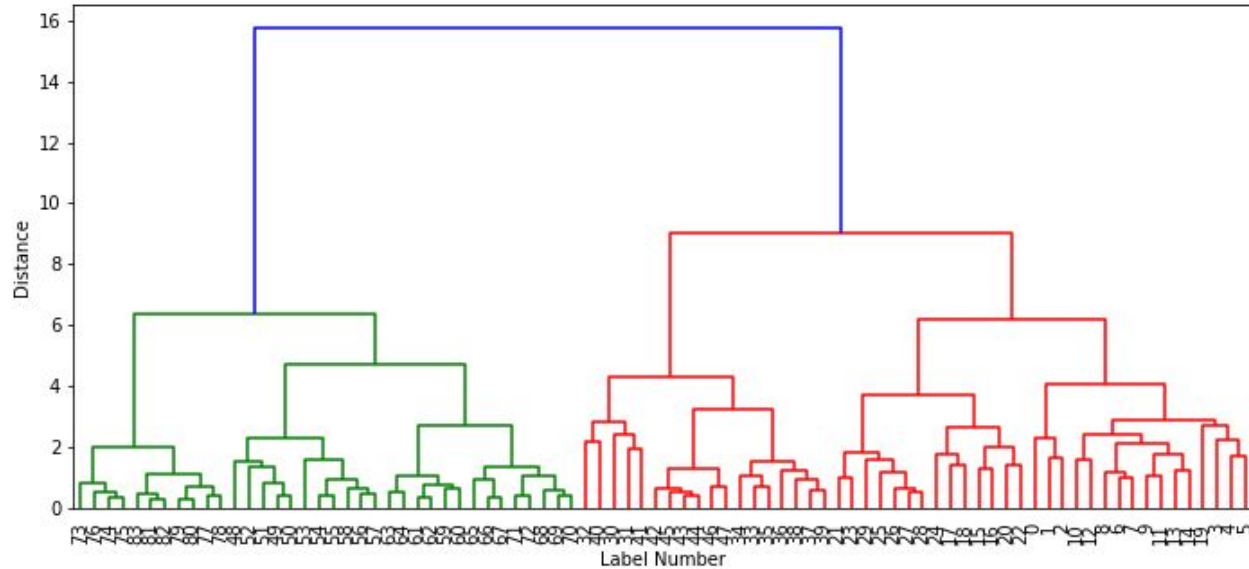
Connectivity Matrices



Connectivity Matrices



Clustering



Hierarchical clustering (ward, euclidean) of the parcellation labels using Mean FA values

Challenges



- Tried to give mean_FA and distances_mean info to GMWCs solver
 - Need to decide what weight to give the nodes
 - Edge weights is number of streamlines
- Can we use clustering information to reduce size of graph?
- What type of graph should we construct from these matrices?



Thank You!