Discussion

The similarities in the methods of clustering is partitioning each sets of data into groups. The more similar the pieces of data are, the higher chances they have being grouped together. The hierarchal clustering algorithm, we sort the data bottom up (in this case) by dividing it into multiple subgroups and finding the pieces that are most similar to each other and placing them lower down on the tree. Then the pieces that do not correspond as well go higher up, splitting into less subgroups and forming a hierarchy. In the k-means algorithm, they were grouped together by distance and could use the mean to cluster those distances into different subgroups. This is has a faster run time than the hierarchal clustering algorithm.