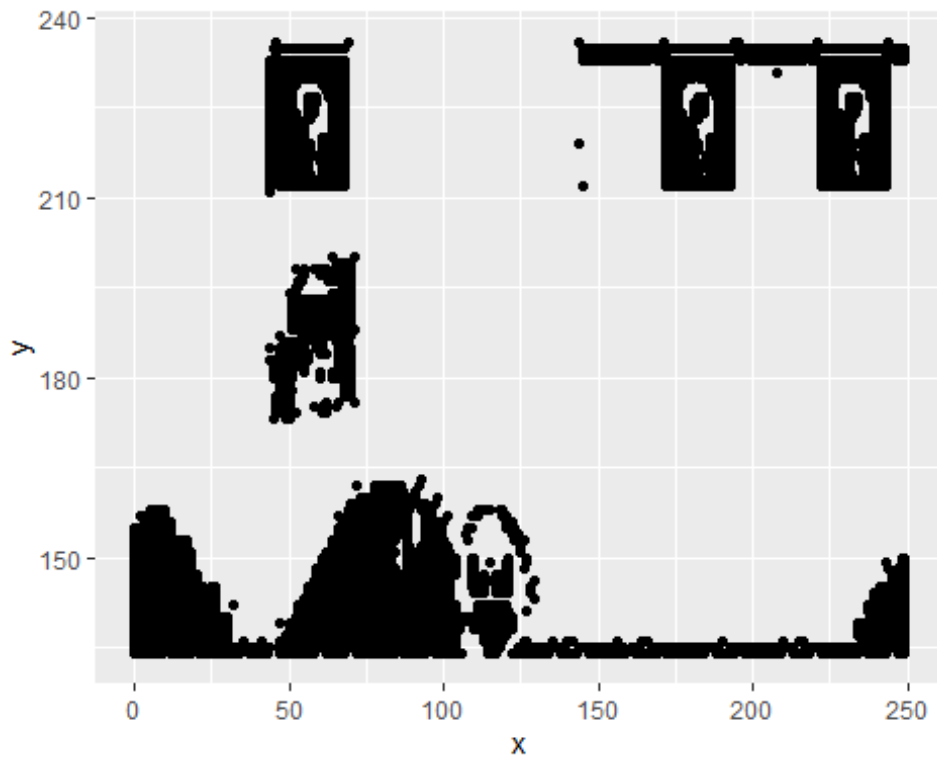


Week12_Assignment02ML

Jackson Aquino

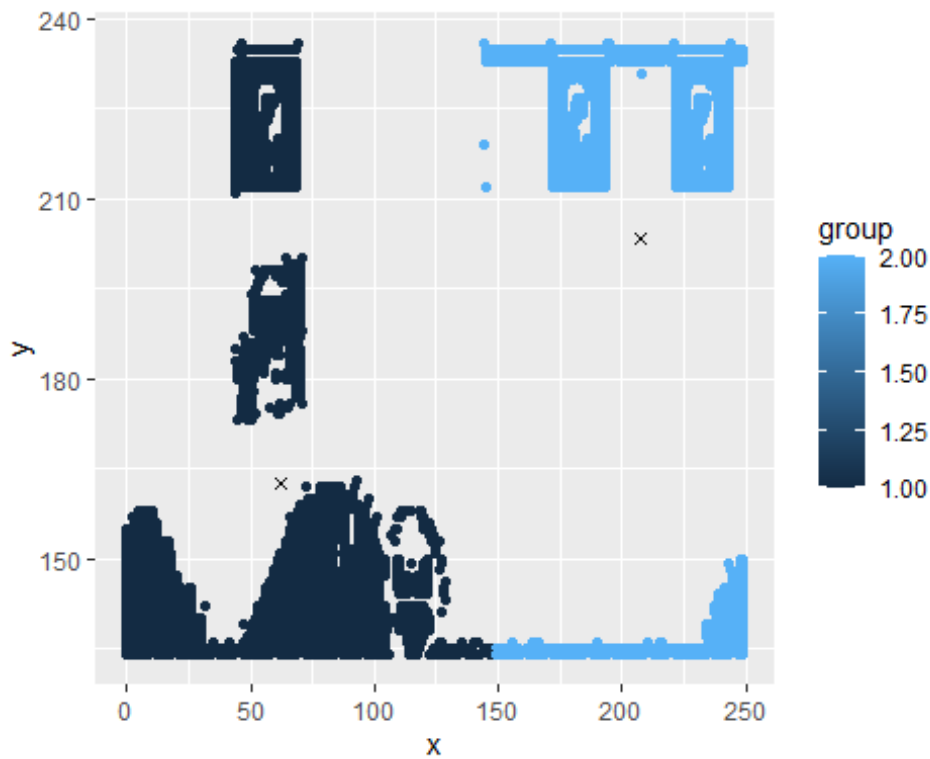
2022-06-02

Plotting the data

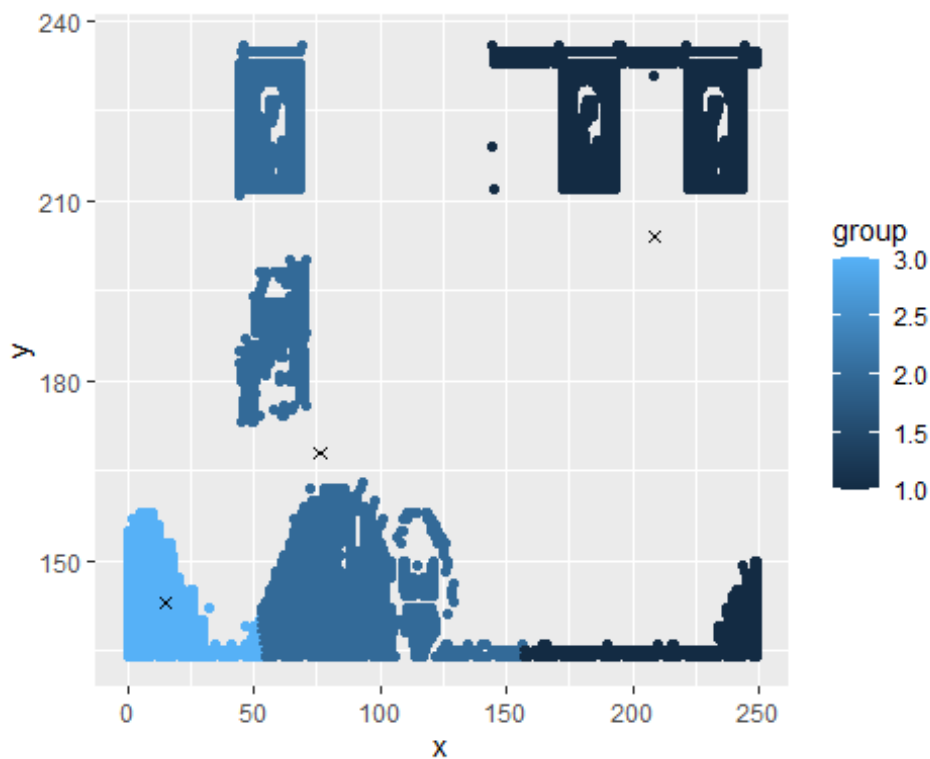


Now, fitting a K-means model and plotting the data again with the centers defined by the model

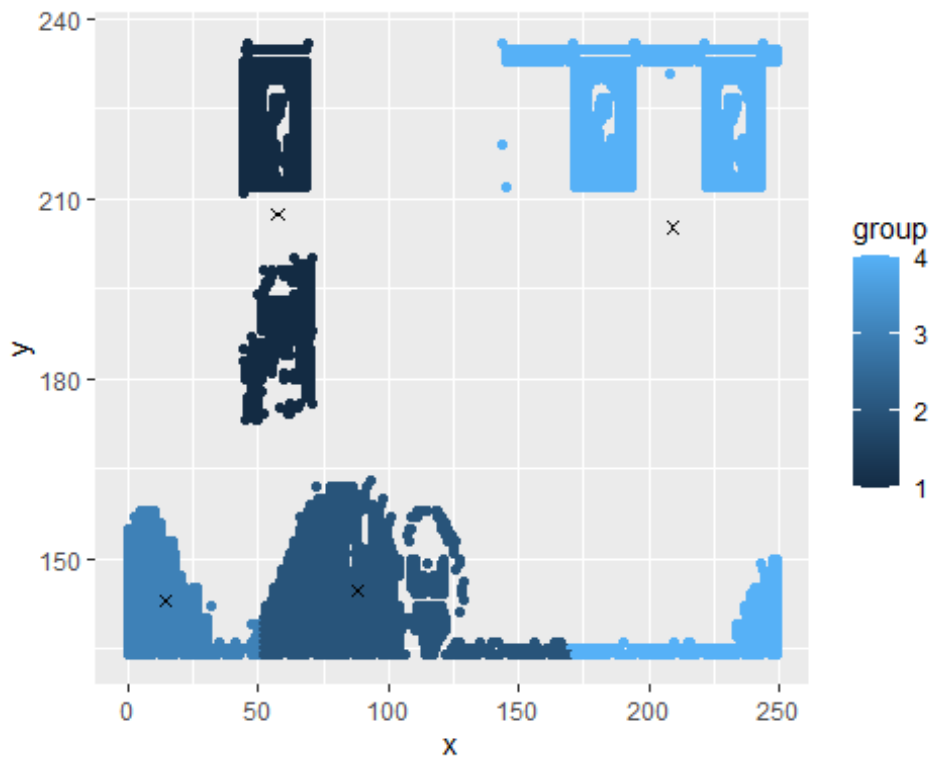
With 2 centers:



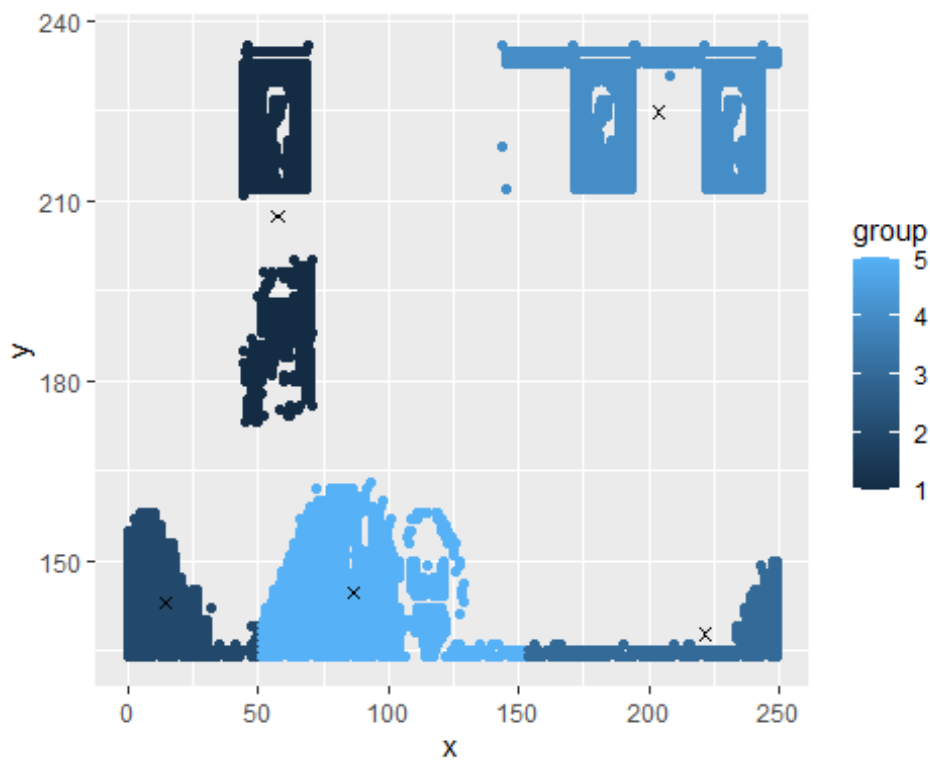
With 3 centers:



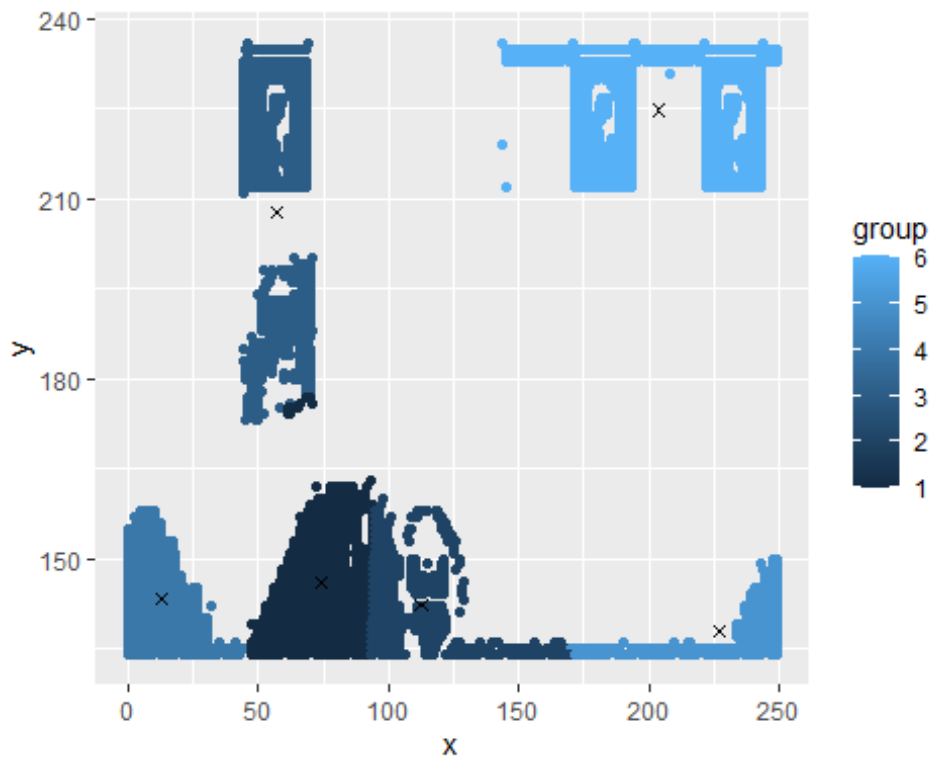
With 4 centers:



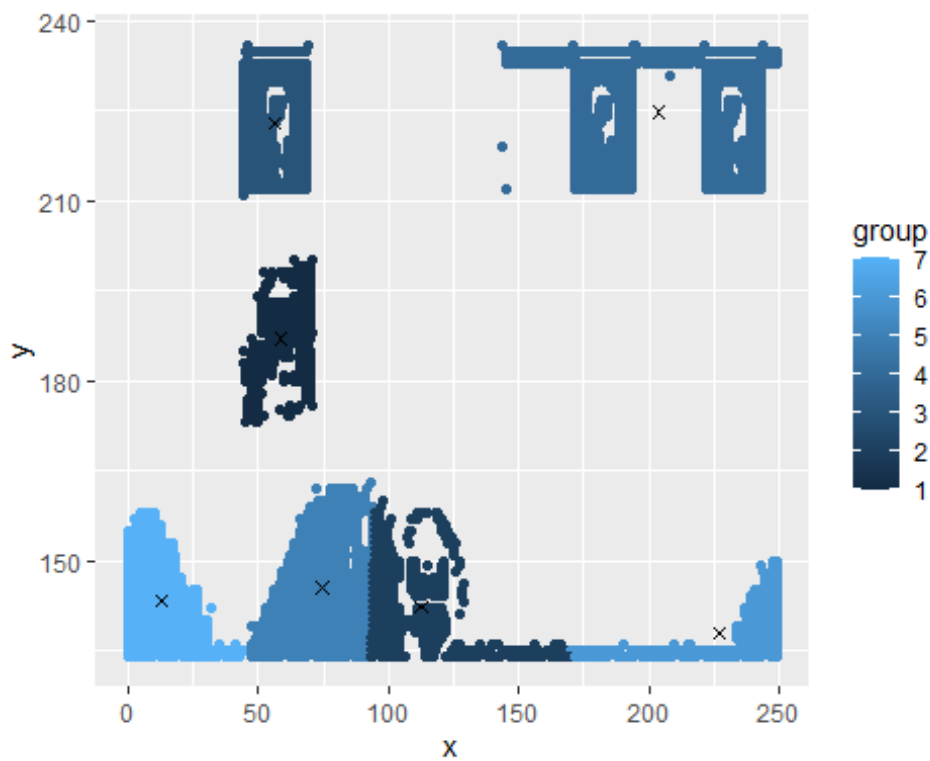
With 5 centers:



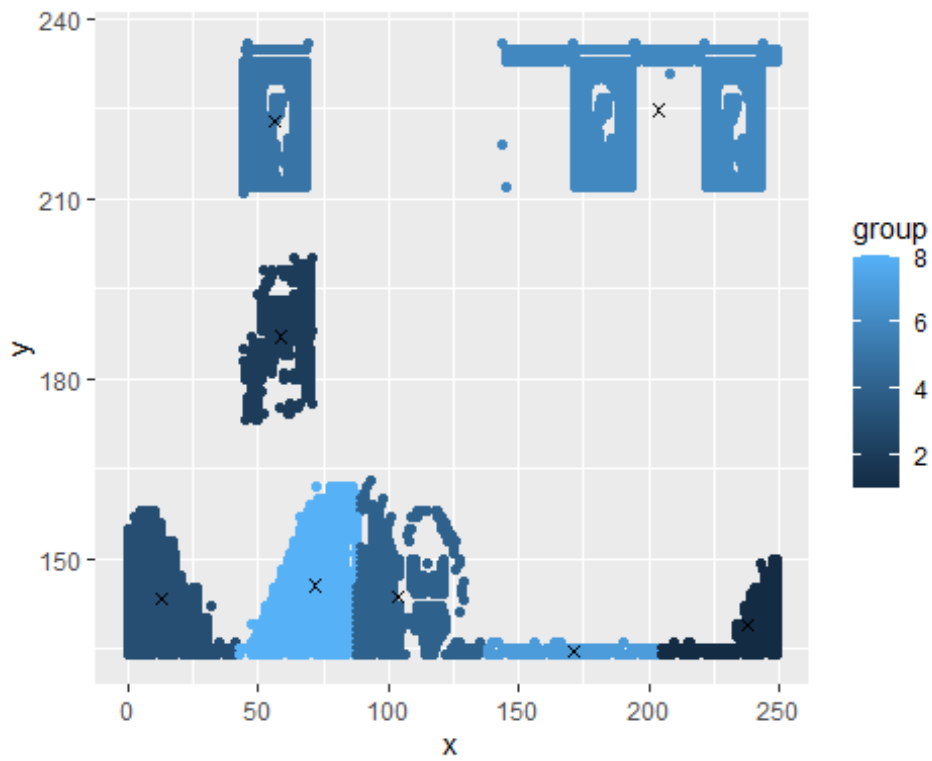
With 6 centers:



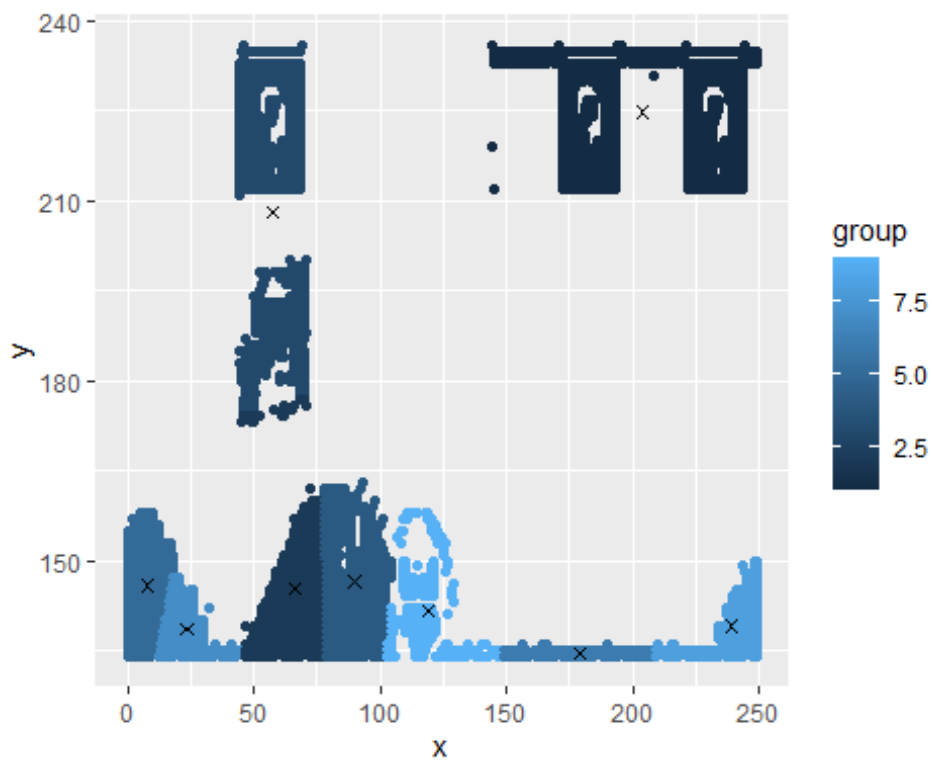
With 7 centers:



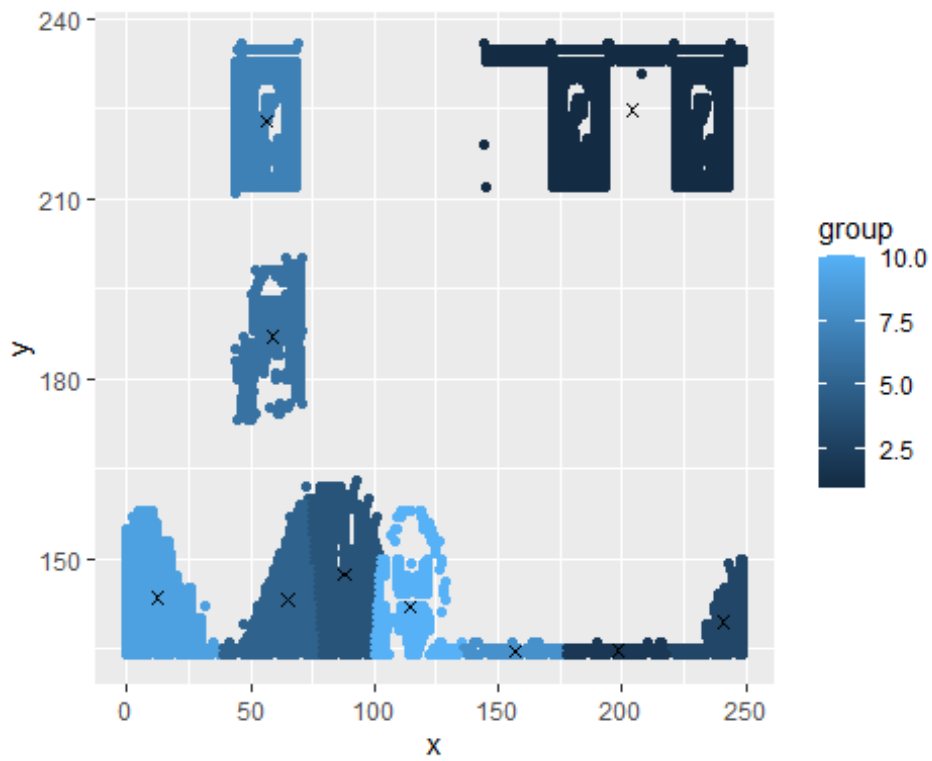
With 8 centers:



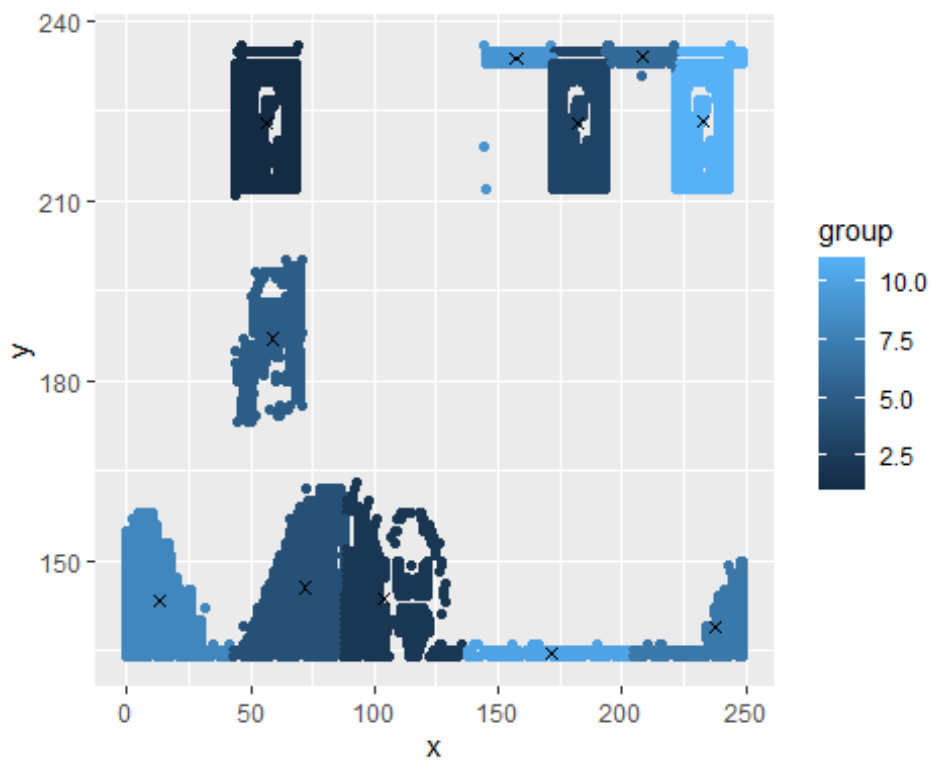
With 9 centers:



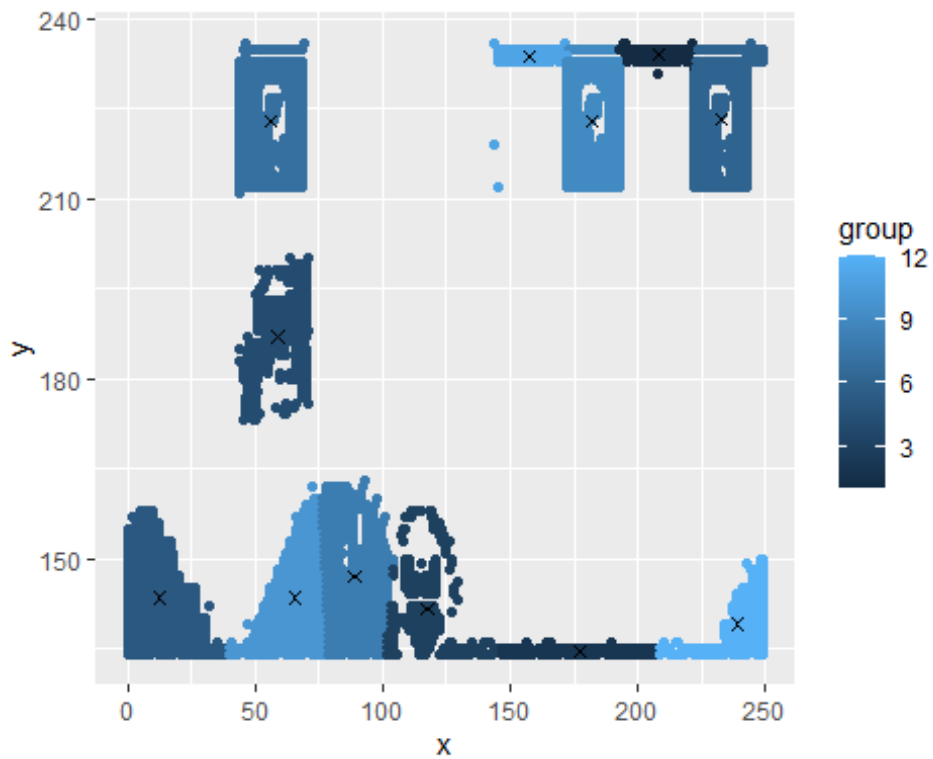
With 10 centers:



With 11 centers:

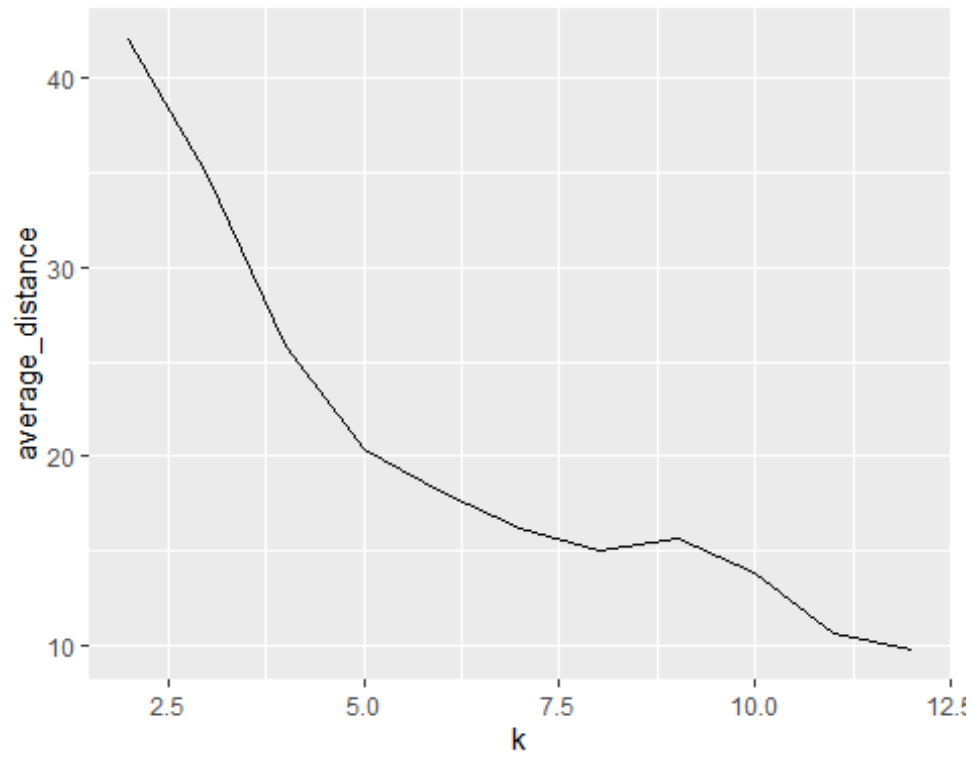


With 12 centers:



Average Distance

Here's how the average distance varies with the number of groups:



In this case I would use 8 groups, having more than this adds a lot more complexity to the model without decreasing the average distance too much.