1. **Read in the cluster\_data from our course GitHub.**
2. **Plot the data from the file.**
3. **Run the kmeans function a single time with 3 and 4 clusters.**
4. **Plot the results and associated centroids for each output.**
5. **Rerun the kmeans functions, repeating the process 50 times for each cluster count.**
6. **Plot the new results and compare them to the single run.**
7. **Run the kmeans function over a range from 2 to 10 clusters and create the associate “elbow” plot from the notes.**
8. **Do the same but calculate the CH index and plot the associated score.**