A screenshot of a computer

Description automatically generated

A screenshot of a graph

Description automatically generated

A screenshot of a computer screen

Description automatically generated

Cluster 1,2,3, and 5 have an overlap. These clusters have a higher mean compared to cluster 4. Cluster 3 has the highest mean value for calories, sodium, potassium, and vitamins. Cluster 2 and 5 have a few outliers with the means in fiber and sugar. Since these means are by far smaller than other mean values. When looking at the standard deviations, we see that clusters 1,2,3, and 5 have some significant higher deviations when compared to cluster 4. The highest mean value for cluster for the variable “Calories” is in cluster 3 with a value of 116.66. For Protein the highest mean value is in cluster 5 with a value of 2.826. Variable Fat the highest value is in cluster 3 with a value of 0.833. Highest sodium is in cluster 3 with a208.33. Fiber is the highest in variable 5 by 1.913. Carbo variable is higher in cluster 3 with a value of 18.166. The variable of sugar is higher in cluster 1 when compared to other clusters. For the case of vitamins, the highest value is in cluster 3 with a value of 100.

A screenshot of a computer

Description automatically generated

A graph of different types of food

Description automatically generated with medium confidence

A screen shot of a graph

Description automatically generated

We see that there is an overall between cluster 2 and 3. These clusters also have some outliers. We see that the cluster 2 and 3 have an overlap on mean variables like calories, protein, fat, fiber carbo, sugar. Since there is an overlap between the cluster 2 and 3, we can understand that the center of these clusters is closer to one another, and they might be at the point of convergence. Looking at the standard deviation we also see that there is some significant level of higher deviation in some of the variables in all the 3 clusters. For example, the variable sodium has a higher standard deviation compared to other variables. When comparing each variable on it’s on we see that calories has the highest value in cluster 2 when compared to other clusters. For protein, it is higher in cluster 1 with a value of 4. Fat component is higher in cluster 2 with a value 1.5. Sodium is higher in cluster 1 with a value of 176.66. Fiber is higher in cluster 1 with a score value 11. Carbo is higher in cluster 3 with a value of 17.42. Variable sugar is higher in cluster 2 with a value of 10.605. The value for potassium is higher in cluster 1 with a value of 310. Finally, the variable of vitamin is the highest in cluster 3 with a factor value of 32.57.

I would prefer cluster 3, because the more the clusters the lower the number for variance. Which would make the model ideal one to use, because it means that you can make a better prediction in the information about the population based on the sample data. Higher variability means that the values are less consistent, so it’s harder to make predictions.

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