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Intro to Data Science (CSC 346 D01 Spring 2022).

Assignment – 1 (Project 1).

Date: 1-26-2022.

Project 1:

Problem 1:

- Created a GitHub repository for the course and my repository link is followed by https://github.com/nk755799/IDS .
- Downloaded the Chicken weights dataset from the Professor GitHub repository and saved it in my repository.

Purpose of Project:

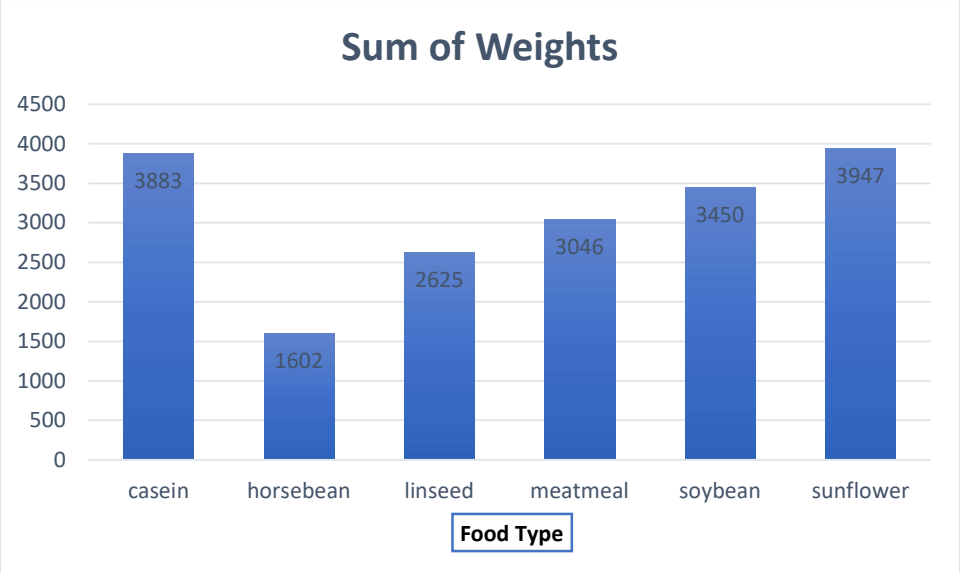
Based on the chicken feed data have to find which type of chicken food appears the most beneficial for a thriving poultry business.

Operations:

Analyzed the Chicken weights and their Feed type in the Excel worksheet and got the maximum, minimum, and mean values from the data.

Food Type	Min weight	Max weight	Mean weight
casein	216	404	323.6
horsebean	108	227	160.2
linseed	141	309	218.8
meatmeal	153	380	276.9
soybean	158	329	246.4
sunflower	226	423	328.9
Grand Total	**108**	**423**	**261.3**

Created a graph using the Food type and their sum of weights as given below,



Observations:

As per the above graph chart and Pivot table, we must know that the Chickens which take sunflower as their feeding get the highest weight compared to the remaining ones and casein placed second placed for gaining weight. chickens that take the horsebean got the lowest weight so this type of food type is useless for weight gaining and the chicken which take their feeding as meatmeal get a balanced weight.

Conclusion:

It can be concluded that "sunflower" is the greatest feed for all six feeds, providing the best increase in weight.

Problem 2:

Purpose of the Project:

#	Insurance provider	Rating (out of 10)
1	GEICO	4.7
2	GEICO	8.3
3	GEICO	9.2
4	Progressive	7.4
5	Progressive	6.7
6	Progressive	8.9
7	USAA	3.8
8	USAA	6.3
9	USAA	8.1

From the above-given table, we have some Insurance Provider organizations and their respective ratings and now the goal was to analyze the data and opt for the best Insurance provider organization given above.

Collection of Data:

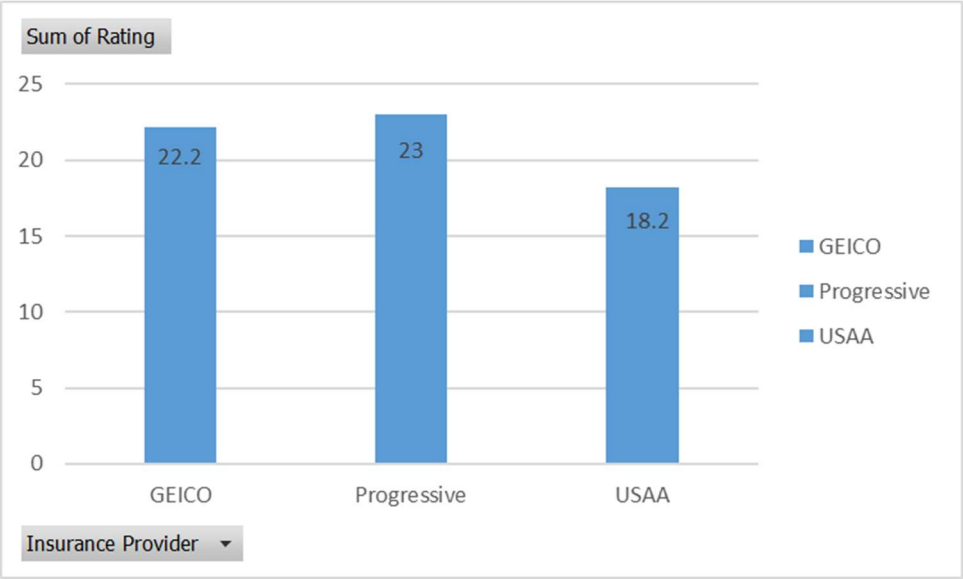
From the above-given data created a CSV file in Excel Worksheet and uploaded it into my GitHub repository and accessed the data to get the mean, max, and min values from the given data.

Operations:

Analyzed the Insurance Providers and their Ratings in the Excel worksheet and got the maximum, minimum, and mean values from the data by using the Pivot table.

Insurance Provider	Min Rating	Max Rating	Average Rating
GEICO	4.7	9.2	7.4
Progressive	6.7	8.9	7.7
USAA	3.8	8.1	6.1
Grand Total	**3.8**	**9.2**	**7.0**

Created a graph chart using Insurance Provider and their Sum of Rating as below,



Observations:

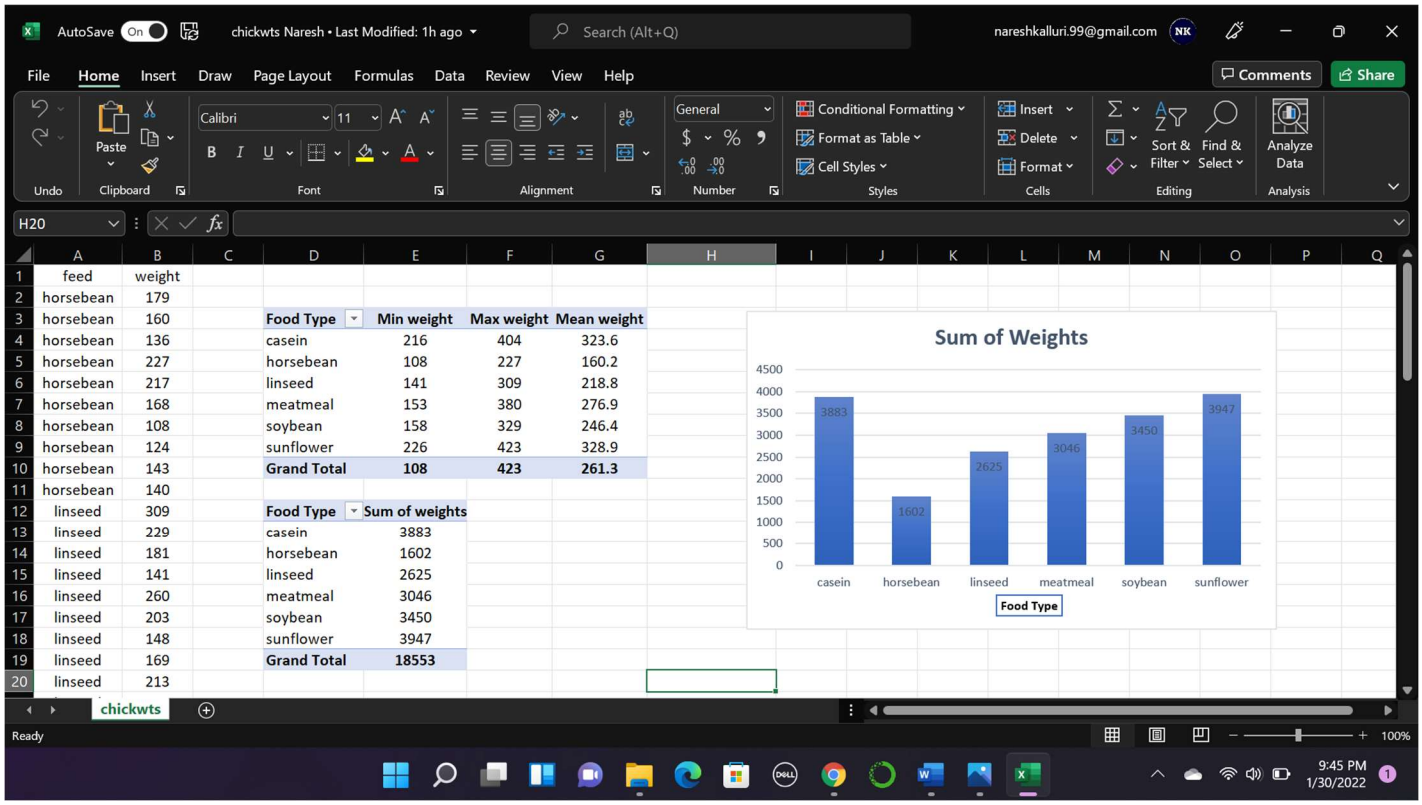
As per the above graph and pivot table, based on the average (Mean) the progressive insurance has the highest sum of rating i.e., 23 compared to GEICO and USAA. GEICO got the Maximum rating once 9.2 but on average it can't beat the Progressive.

Conclusion:

Hence, based on all the calculations if I have to opt for an Insurance Provider organization from the above data I will go for Progressive Insurance.

Below I'm presenting my Excel Worksheets which I did for Problem1 and Problem2 and uploaded the worksheets to my GitHub repository please check it.

Problem1:

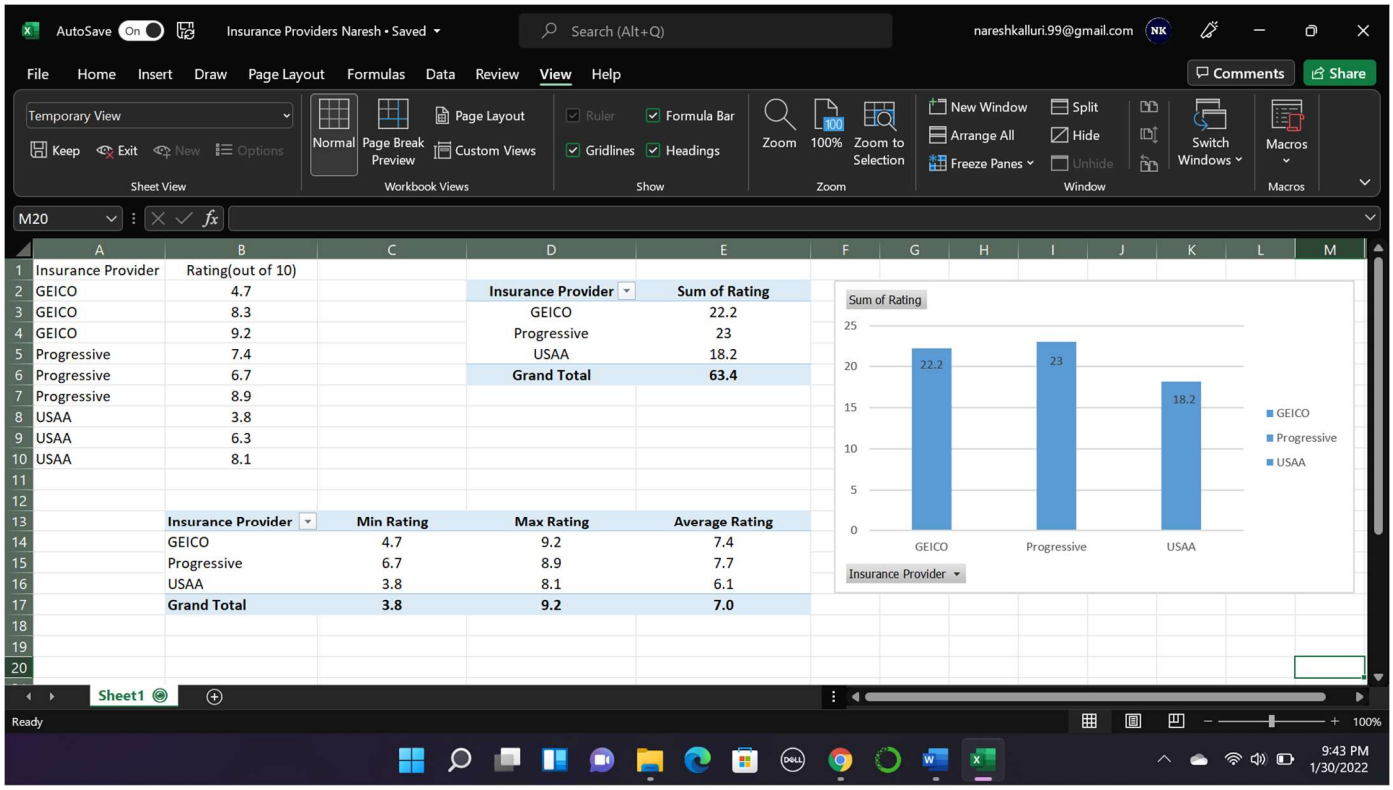


feed	weight
horsebean	179
horsebean	160
horsebean	136
horsebean	227
horsebean	217
horsebean	168
horsebean	108
horsebean	124
horsebean	143
horsebean	140
linseed	309
linseed	229
linseed	181
linseed	141
linseed	260
linseed	203
linseed	148
linseed	169
linseed	213

Food Type	Min weight	Max weight	Mean weight
casein	216	404	323.6
horsebean	108	227	160.2
linseed	141	309	218.8
meatmeal	153	380	276.9
soybean	158	329	246.4
sunflower	226	423	328.9
Grand Total	**108**	**423**	**261.3**

Food Type	Sum of weights
casein	3883
horsebean	1602
linseed	2625
meatmeal	3046
soybean	3450
sunflower	3947
Grand Total	**18553**

Problem2:



Insurance Provider	Rating(out of 10)
GEICO	4.7
GEICO	8.3
GEICO	9.2
Progressive	7.4
Progressive	6.7
Progressive	8.9
USAA	3.8
USAA	6.3
USAA	8.1

Insurance Provider	Sum of Rating
GEICO	22.2
Progressive	23
USAA	18.2
Grand Total	**63.4**

Insurance Provider	Min Rating	Max Rating	Average Rating
GEICO	4.7	9.2	7.4
Progressive	6.7	8.9	7.7
USAA	3.8	8.1	6.1
Grand Total	**3.8**	**9.2**	**7.0**