

Data Appendix for the food.csv Dataset

Overview

- **Total Records:** 7,083
- **Total Variables:** 38
- **Dataset Purpose:** Nutritional information for various food items, including macro- and micronutrient data, vitamins, and minerals.

Variable Descriptions

1. **Category** (*string*): General category of the food item (e.g., "Milk").
2. **Description** (*string*): Specific description of the food item (e.g., "Milk, human").
3. **Nutrient Data Bank Number** (*integer*): Unique identifier for the food item in the nutrient database.
4. **Data.Alpha Carotene** (*integer*): Content of alpha-carotene in micrograms.
5. **Data.Beta Carotene** (*integer*): Content of beta-carotene in micrograms.
6. **Data.Beta Cryptoxanthin** (*integer*): Content of beta-cryptoxanthin in micrograms.
7. **Data.Carbohydrate** (*float*): Total carbohydrate content in grams.
8. **Data.Cholesterol** (*integer*): Cholesterol content in milligrams.
9. **Data.Choline** (*float*): Content of choline in milligrams.
10. **Data.Fiber** (*float*): Dietary fiber content in grams.
11. **Data.Lutein and Zeaxanthin** (*integer*): Content of lutein and zeaxanthin in micrograms.
12. **Data.Lycopene** (*integer*): Lycopene content in micrograms.
13. **Data.Niacin** (*float*): Niacin content in milligrams.
14. **Data.Protein** (*float*): Protein content in grams.
15. **Data.Retinol** (*integer*): Retinol content in micrograms.
16. **Data.Riboflavin** (*float*): Riboflavin content in milligrams.
17. **Data.Selenium** (*float*): Selenium content in micrograms.
18. **Data.Sugar Total** (*float*): Total sugar content in grams.
19. **Data.Thiamin** (*float*): Thiamin content in milligrams.
20. **Data.Water** (*float*): Water content in grams.
21. **Data.Fat.Monosaturated Fat** (*float*): Monounsaturated fat content in grams.
22. **Data.Fat.Polysaturated Fat** (*float*): Polyunsaturated fat content in grams.
23. **Data.Fat.Saturated Fat** (*float*): Saturated fat content in grams.
24. **Data.Fat.Total Lipid** (*float*): Total fat content in grams.
25. **Data.Major Minerals.Calcium** (*integer*): Calcium content in milligrams.
26. **Data.Major Minerals.Copper** (*float*): Copper content in milligrams.
27. **Data.Major Minerals.Iron** (*float*): Iron content in milligrams.
28. **Data.Major Minerals.Magnesium** (*integer*): Magnesium content in milligrams.

- 29. **Data.Major Minerals.Phosphorus** (*integer*): Phosphorus content in milligrams.
- 30. **Data.Major Minerals.Potassium** (*integer*): Potassium content in milligrams.
- 31. **Data.Major Minerals.Sodium** (*integer*): Sodium content in milligrams.
- 32. **Data.Major Minerals.Zinc** (*float*): Zinc content in milligrams.
- 33. **Data.Vitamins.Vitamin A - RAE** (*integer*): Vitamin A content (RAE) in micrograms.
- 34. **Data.Vitamins.Vitamin B12** (*float*): Vitamin B12 content in micrograms.
- 35. **Data.Vitamins.Vitamin B6** (*float*): Vitamin B6 content in milligrams.
- 36. **Data.Vitamins.Vitamin C** (*float*): Vitamin C content in milligrams.
- 37. **Data.Vitamins.Vitamin E** (*float*): Vitamin E content in milligrams.
- 38. **Data.Vitamins.Vitamin K** (*float*): Vitamin K content in micrograms.

32x32x3 Images

Variable Descriptive Statistics

Variable	Shape	Min Value	Max Value	Mean	Std Dev
images	(10,099, 32, 32, 3)	0	255	~128.0	~64.0
category	(10,099, 101)	0	1	N/A	N/A

Key Metrics

Metric	Value
Training Accuracy	21.88%
Training Loss	3.7452
Validation Accuracy	15.62%
Validation Loss	3.7764
Test Accuracy	15.62%
Test Loss	3.7764

Classification Report

Class	Precision	Recall	F1-Score	Support
0	0.00	0.00	0.00	1
25	0.10	1.00	0.17	2
53	1.00	0.50	0.67	2
60	1.00	1.00	1.00	1
68	1.00	1.00	1.00	1
Others	0.00	0.00	0.00	1

64x64x3 images

Metric	Value
Training Accuracy	0.8125
Training Loss	0.7950
Validation Accuracy	0.9688
Validation Loss	0.2426
Test Accuracy	0.9688
Test Loss	0.2426

	precision	recall	f1-score	support
0	1.00	1.00	1.00	1
1	0.00	0.00	0.00	1
8	1.00	1.00	1.00	1
13	1.00	1.00	1.00	1
16	1.00	1.00	1.00	1
19	1.00	1.00	1.00	1
22	1.00	1.00	1.00	1
23	1.00	1.00	1.00	1
25	1.00	1.00	1.00	2
30	1.00	1.00	1.00	1
31	1.00	1.00	1.00	1
33	1.00	1.00	1.00	1
35	1.00	1.00	1.00	1
38	1.00	1.00	1.00	1
43	1.00	1.00	1.00	1
44	1.00	1.00	1.00	1
45	1.00	1.00	1.00	1
53	1.00	1.00	1.00	1
55	1.00	1.00	1.00	2
60	1.00	1.00	1.00	1
68	1.00	1.00	1.00	1
70	1.00	1.00	1.00	2
77	0.50	1.00	0.67	1
82	1.00	1.00	1.00	1
83	1.00	1.00	1.00	1
86	1.00	1.00	1.00	1
89	1.00	1.00	1.00	1
92	1.00	1.00	1.00	1
98	1.00	1.00	1.00	1
accuracy			0.97	32
macro avg	0.95	0.97	0.95	32
weighted avg	0.95	0.97	0.96	32

384x384x3 Images

Metric	Value
Training Accuracy	0.9688
Training Loss	0.2453
Validation Accuracy	1.0000
Validation Loss	0.0591
Test Accuracy	1.0000
Test Loss	0.0591

	precision	recall	f1-score	support
2	1.00	1.00	1.00	1
7	1.00	1.00	1.00	1
13	1.00	1.00	1.00	1
16	1.00	1.00	1.00	1
17	1.00	1.00	1.00	1
18	1.00	1.00	1.00	1
21	1.00	1.00	1.00	1
24	1.00	1.00	1.00	1
29	1.00	1.00	1.00	1
33	1.00	1.00	1.00	2
43	1.00	1.00	1.00	1
47	1.00	1.00	1.00	1
50	1.00	1.00	1.00	2
54	1.00	1.00	1.00	1
57	1.00	1.00	1.00	1
60	1.00	1.00	1.00	1
63	1.00	1.00	1.00	3
68	1.00	1.00	1.00	1
72	1.00	1.00	1.00	1
74	1.00	1.00	1.00	1
77	1.00	1.00	1.00	1
83	1.00	1.00	1.00	2
86	1.00	1.00	1.00	1
88	1.00	1.00	1.00	1
89	1.00	1.00	1.00	1
99	1.00	1.00	1.00	1
100	1.00	1.00	1.00	1
accuracy			1.00	32
macro avg	1.00	1.00	1.00	32
weighted avg	1.00	1.00	1.00	32

Notes:

- All variables are complete with no missing data.
- Data types include integers, floats, and strings.
- Units of measurement are specified for each nutrient.

