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Assignment 5 Part 1 - Cereal

Cereal Analysis

part of the raw data after replacing -1 by missing values

Obs	name	manufacturer	type	calories	protein	fat	sodium	fiber	complex_carbs	sugars	shelf
1	100%_Bran	N	C	60	4	1	130	10.0	5.0	6	3
2	100%_Natural_Bran	Q	C	110	3	5	15	2.0	8.0	8	3
3	All-Bran	K	C	80	4	1	260	9.0	7.0	5	3
4	All-Bran_with_Extra_Fiber	K	C	50	4	0	140	14.0	8.0	0	3
5	Almond_Delight	R	C	110	2	2	200	1.0	14.0	8	3
6	Apple_Cinnamon_Cheerios	G	C	110	2	2	180	1.5	10.5	10	1
7	Apple_Jacks	K	C	110	2	0	125	1.0	11.0	14	2
8	Basic_4	G	C	140	3	2	210	2.0	18.0	8	3
9	Bran_Chex	R	C	90	2	1	200	4.0	15.0	6	1
10	Bran_Flakes	P	C	90	3	0	210	5.0	13.0	5	3

Obs	potassium	vit_rda	weight	cups_per_serving
1	280	25	1.00	0.33
2	135	0	1.00	.
3	320	25	1.00	0.33
4	330	25	1.00	0.50
5	.	25	1.00	0.75
6	70	25	1.00	0.75
7	30	25	1.00	1.00
8	100	25	1.33	0.75
9	125	25	1.00	0.67
10	190	25	1.00	0.67

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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the model space

Obs	protein	fat	complex_carbs	sugars
1	4	1	5.0	6
2	3	5	8.0	8
3	4	1	7.0	5
4	4	0	8.0	0
5	2	2	14.0	8
6	2	2	10.5	10
7	2	0	11.0	14
8	3	2	18.0	8
9	2	1	15.0	6
10	3	0	13.0	5

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Assignment 5 Part 1 - Cereal

Cereal Analysis

part of the simulated data

Obs	sim	protein	fat	complex_carbs	sugars	mu_calories	epsilon	calories
1	1	4	1	5.0	6	69	-0.62612	68.374
2	1	3	5	8.0	8	121	4.20553	125.206
3	1	4	1	7.0	5	73	-0.26289	72.737
4	1	4	0	8.0	0	48	-8.36184	39.638
5	1	2	2	14.0	8	114	-2.94961	111.050
6	1	2	2	10.5	10	108	-2.80820	105.192
7	1	2	0	11.0	14	108	4.71267	112.713
8	1	3	2	18.0	8	134	-1.64003	132.360
9	1	2	1	15.0	6	101	-0.43426	100.566
10	1	3	0	13.0	5	84	2.36037	86.360

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Assignment 5 Part 1 - Cereal

Cereal Analysis

part of the coeficients for each set of simulated dataset when distribution is normal

Obs	sim	_MODEL_	_TYPE_	_DEPVAR_	_RMSE_	Intercept	fat	protein	complex_carbs	sugars	calories
1	1	MODEL1	PARMS	calories	5.08450	4.92130	9.2670	3.19669	3.81099	3.79769	-1
2	2	MODEL1	PARMS	calories	3.94685	0.45964	8.5028	3.84633	4.01305	4.09343	-1
3	3	MODEL1	PARMS	calories	4.64229	3.38051	8.6520	3.51578	3.86795	3.88735	-1
4	4	MODEL1	PARMS	calories	4.22782	-0.84438	9.4301	4.09820	3.94023	4.09158	-1
5	5	MODEL1	PARMS	calories	4.60192	6.90235	8.1556	2.84369	3.87763	3.87853	-1
6	6	MODEL1	PARMS	calories	5.23216	-4.51997	8.9456	3.41698	4.29442	4.23379	-1
7	7	MODEL1	PARMS	calories	4.64378	-2.93270	9.7509	4.09805	4.14686	4.01901	-1
8	8	MODEL1	PARMS	calories	4.73975	3.89639	10.1688	2.98272	3.89426	3.89821	-1
9	9	MODEL1	PARMS	calories	5.45612	5.63894	9.2692	3.68242	3.84082	3.74518	-1
10	10	MODEL1	PARMS	calories	5.35645	5.74426	8.9544	3.10838	3.94218	3.63720	-1

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Assignment 5 Part 1 - Cereal

Cereal Analysis

part of the coeficients for each set of simulated dataset when distribution is normal

The UNIVARIATE Procedure
Variable: Intercept (Intercept)

Moments			
N	1000	Sum Weights	1000
Mean	-0.1366375	Sum Observations	-136.6375
Std Deviation	3.83418834	Variance	14.7010002
Skewness	0.0019342	Kurtosis	0.01990771
Uncorrected SS	14704.969	Corrected SS	14686.2992
Coeff Variation	-2806.1025	Std Error Mean	0.12124768

Basic Statistical Measures			
Location		Variability	
Mean	-0.13664	Std Deviation	3.83419
Median	-0.13552	Variance	14.70100
Mode	.	Range	23.86557
		Interquartile Range	5.12422

Tests for Location: Mu0=0				
Test	Statistic		p Value	
Student's t	t	-1.12693	Pr > |t|	0.2600
Sign	M	-15	Pr >= |M|	0.3591
Signed Rank	S	-9681	Pr >= |S|	0.2895

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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is normal

The UNIVARIATE Procedure
Variable: Intercept (Intercept)

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	12.70432
99%	8.85213
95%	6.04556
90%	4.75136
75% Q3	2.37847
50% Median	-0.13552
25% Q1	-2.74576
10%	-4.99098
5%	-6.66938
1%	-9.02567
0% Min	-11.16125

Extreme Observations			
Lowest		**Highest**	
Value	**Obs**	**Value**	**Obs**
-11.16125	326	9.8949	60
-10.40865	998	10.3709	191
-10.28592	584	11.0991	643
-10.26058	86	11.1882	241
-9.92959	543	12.7043	920

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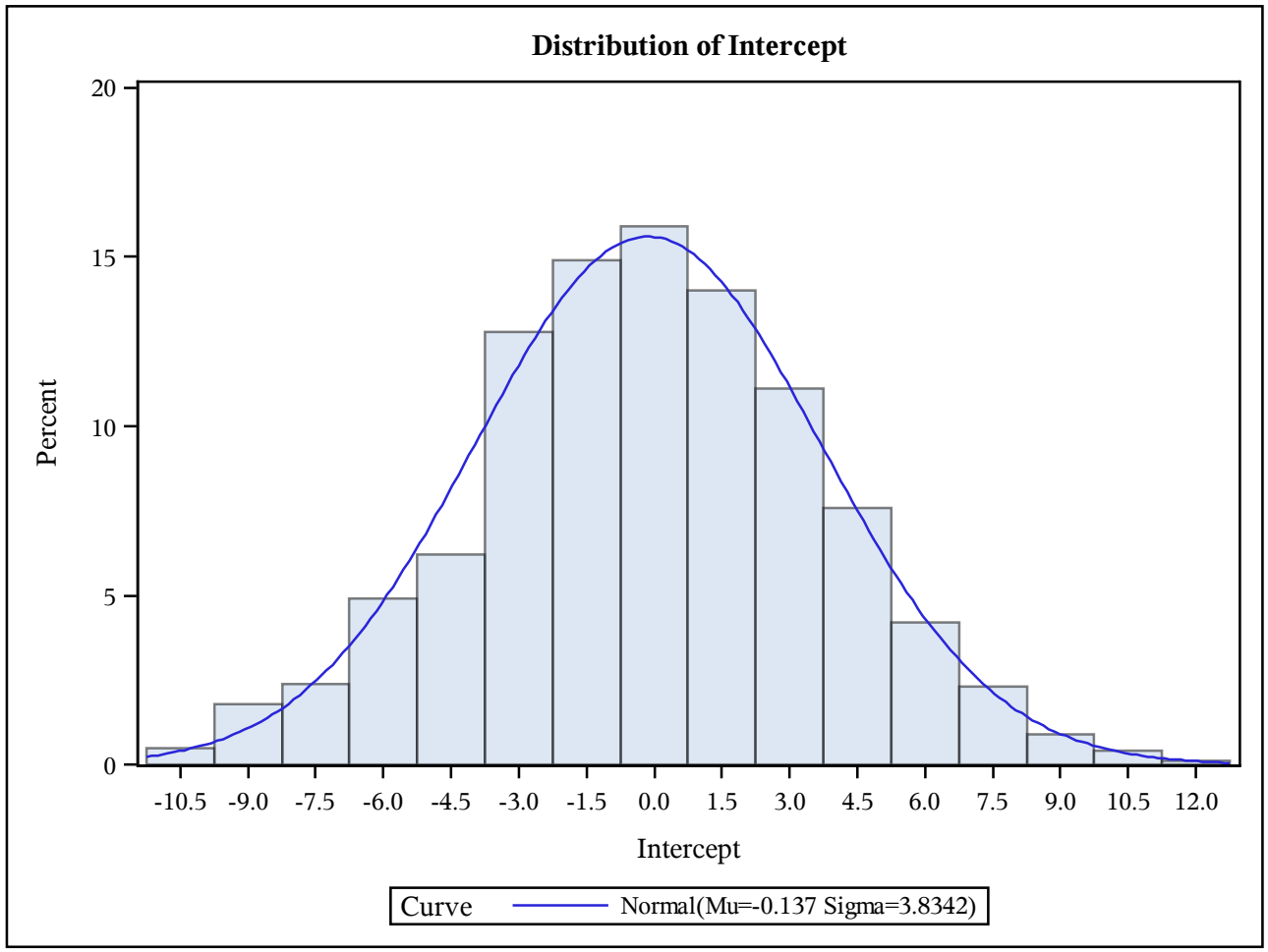
Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is normal

The UNIVARIATE Procedure



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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is normal

The UNIVARIATE Procedure
Fitted Normal Distribution for Intercept (Intercept)

Parameters for Normal Distribution		
Parameter	**Symbol**	**Estimate**
Mean	Mu	-0.13664
Std Dev	Sigma	3.834188

Goodness-of-Fit Tests for Normal Distribution				
Test	**Statistic**		**p Value**	
Kolmogorov-Smirnov	**D**	0.01965317	**Pr > D**	>0.150
Cramer-von Mises	**W-Sq**	0.02889087	**Pr > W-Sq**	>0.250
Anderson-Darling	**A-Sq**	0.25920040	**Pr > A-Sq**	>0.250

Quantiles for Normal Distribution		
	Quantile	
Percent	**Observed**	**Estimated**
1.0	-9.02567	-9.05629
5.0	-6.66938	-6.44332
10.0	-4.99098	-5.05035
25.0	-2.74576	-2.72276
50.0	-0.13552	-0.13664
75.0	2.37847	2.44948
90.0	4.75136	4.77707

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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is normal

The UNIVARIATE Procedure
Fitted Normal Distribution for Intercept (Intercept)

Quantiles for Normal Distribution		
	Quantile	
Percent	Observed	Estimated
95.0	6.04556	6.17004
99.0	8.85213	8.78302

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Assignment 5 Part 1 - Cereal

Cereal Analysis

part of the coeficients for each set of simulated dataset when distribution is normal

The UNIVARIATE Procedure
Variable: fat

Moments			
N	1000	**Sum Weights**	1000
Mean	8.99939805	**Sum Observations**	8999.39805
Std Deviation	0.67433751	**Variance**	0.45473108
Skewness	-0.0187581	**Kurtosis**	-0.2043469
Uncorrected SS	81443.4416	**Corrected SS**	454.276345
Coeff Variation	7.49314015	**Std Error Mean**	0.02132442

Basic Statistical Measures			
Location		**Variability**	
Mean	8.999398	**Std Deviation**	0.67434
Median	8.994889	**Variance**	0.45473
Mode	.	**Range**	4.29789
		Interquartile Range	0.95244

Tests for Location: Mu0=9				
Test	**Statistic**		**p Value**	
Student's t	**t**	-0.02823	**Pr > |t|**	0.9775
Sign	**M**	-2	**Pr >= |M|**	0.9244
Signed Rank	**S**	-1259	**Pr >= |S|**	0.8905

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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is normal

The UNIVARIATE Procedure
Variable: fat

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	10.88625
99%	10.46839
95%	10.12885
90%	9.89545
75% Q3	9.45598
50% Median	8.99489
25% Q1	8.50353
10%	8.14995
5%	7.92034
1%	7.50836
0% Min	6.58836

Extreme Observations			
Lowest		**Highest**	
Value	**Obs**	**Value**	**Obs**
6.58836	239	10.6304	837
6.72973	775	10.6350	579
7.16339	854	10.6943	123
7.21015	549	10.7808	569
7.27462	719	10.8862	840

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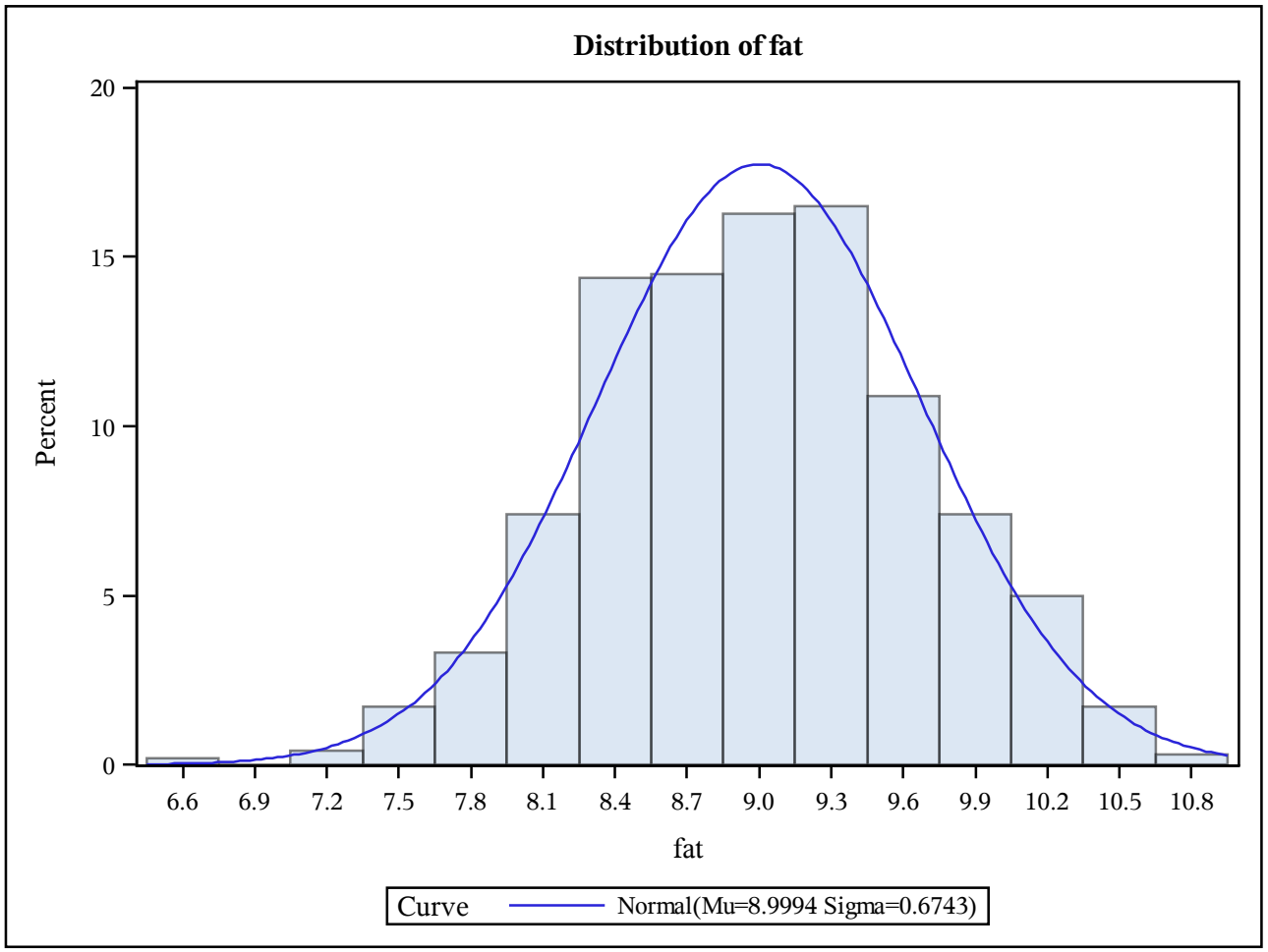
Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is normal

The UNIVARIATE Procedure



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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is normal

The UNIVARIATE Procedure
Fitted Normal Distribution for fat

Parameters for Normal Distribution		
Parameter	**Symbol**	**Estimate**
Mean	Mu	8.999398
Std Dev	Sigma	0.674338

Goodness-of-Fit Tests for Normal Distribution				
Test	**Statistic**		**p Value**	
Kolmogorov-Smirnov	**D**	0.02832101	**Pr > D**	0.050
Cramer-von Mises	**W-Sq**	0.10897236	**Pr > W-Sq**	0.089
Anderson-Darling	**A-Sq**	0.69822716	**Pr > A-Sq**	0.072

Quantiles for Normal Distribution		
	Quantile	
Percent	**Observed**	**Estimated**
1.0	7.50836	7.43065
5.0	7.92034	7.89021
10.0	8.14995	8.13520
25.0	8.50353	8.54456
50.0	8.99489	8.99940
75.0	9.45598	9.45423
90.0	9.89545	9.86360

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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is normal

The UNIVARIATE Procedure
Fitted Normal Distribution for fat

Quantiles for Normal Distribution		
	Quantile	
Percent	Observed	Estimated
95.0	10.12885	10.10858
99.0	10.46839	10.56814

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Assignment 5 Part 1 - Cereal

Cereal Analysis

part of the coeficients for each set of simulated dataset when distribution is normal

The UNIVARIATE Procedure
Variable: protein

Moments			
N	1000	**Sum Weights**	1000
Mean	4.02244489	**Sum Observations**	4022.44489
Std Deviation	0.58768939	**Variance**	0.34537882
Skewness	0.02587293	**Kurtosis**	-0.1871005
Uncorrected SS	16525.0964	**Corrected SS**	345.03344
Coeff Variation	14.6102533	**Std Error Mean**	0.01858437

Basic Statistical Measures			
Location		**Variability**	
Mean	4.022445	**Std Deviation**	0.58769
Median	4.033899	**Variance**	0.34538
Mode	.	**Range**	3.52170
		Interquartile Range	0.76556

Tests for Location: Mu0=4				
Test	**Statistic**		**p Value**	
Student's t	**t**	1.20773	**Pr > |t|**	0.2274
Sign	**M**	23	**Pr >= |M|**	0.1547
Signed Rank	**S**	10332	**Pr >= |S|**	0.2583

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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is normal

The UNIVARIATE Procedure
Variable: protein

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	5.96106
99%	5.36381
95%	5.03467
90%	4.80084
75% Q3	4.39872
50% Median	4.03390
25% Q1	3.63316
10%	3.25209
5%	3.00392
1%	2.69604
0% Min	2.43936

Extreme Observations			
Lowest		**Highest**	
Value	**Obs**	**Value**	**Obs**
2.43936	714	5.46771	131
2.47919	595	5.46867	154
2.56567	157	5.52517	141
2.60174	69	5.53818	86
2.62504	638	5.96106	558

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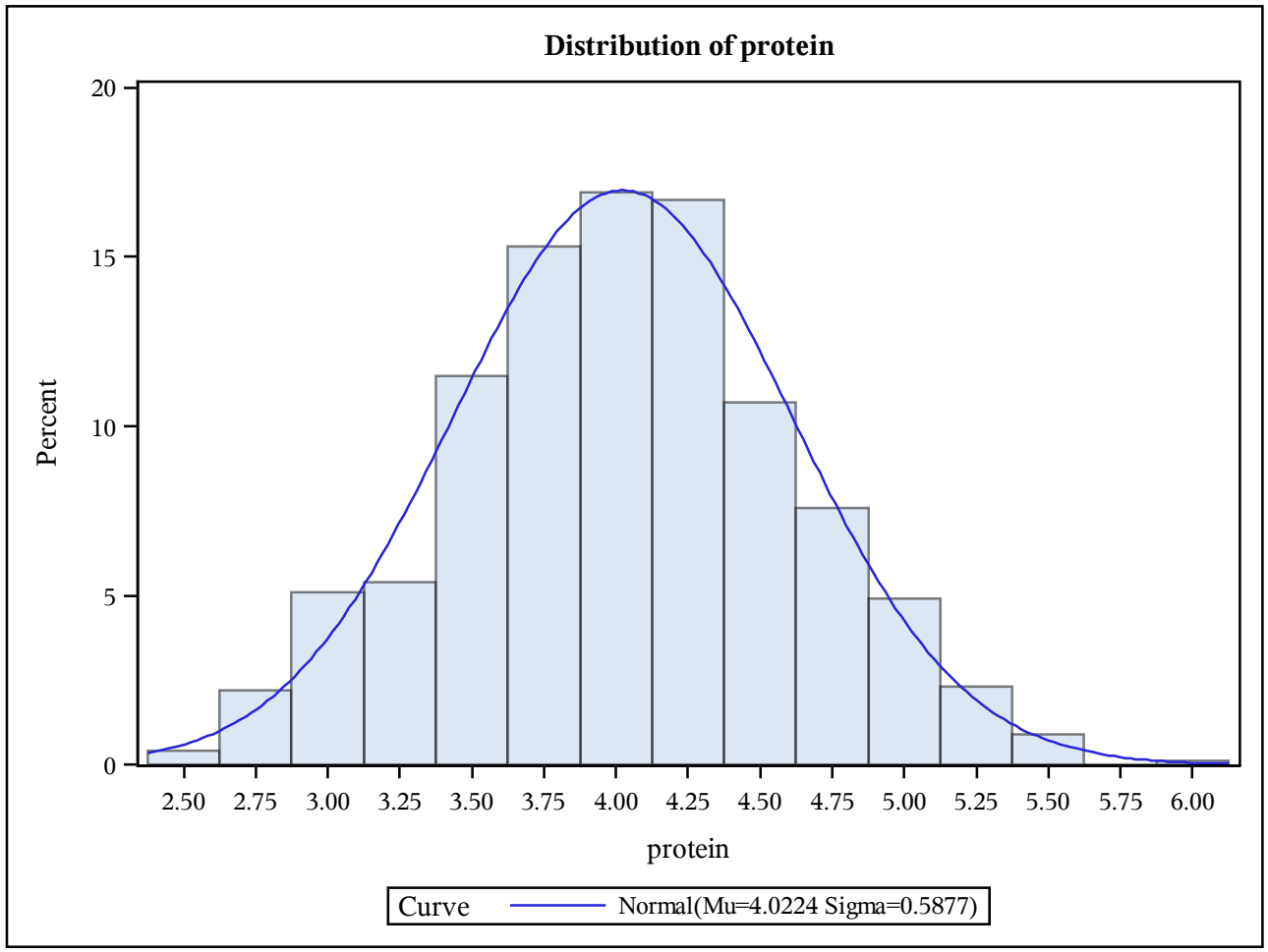
Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is normal

The UNIVARIATE Procedure



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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is normal

The UNIVARIATE Procedure
Fitted Normal Distribution for protein

Parameters for Normal Distribution		
Parameter	**Symbol**	**Estimate**
Mean	Mu	4.022445
Std Dev	Sigma	0.587689

Goodness-of-Fit Tests for Normal Distribution				
Test	**Statistic**		**p Value**	
Kolmogorov-Smirnov	**D**	0.01574633	**Pr > D**	>0.150
Cramer-von Mises	**W-Sq**	0.03450383	**Pr > W-Sq**	>0.250
Anderson-Darling	**A-Sq**	0.31729219	**Pr > A-Sq**	>0.250

Quantiles for Normal Distribution		
	Quantile	
Percent	**Observed**	**Estimated**
1.0	2.69604	2.65527
5.0	3.00392	3.05578
10.0	3.25209	3.26929
25.0	3.63316	3.62605
50.0	4.03390	4.02244
75.0	4.39872	4.41884
90.0	4.80084	4.77560

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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is normal

The UNIVARIATE Procedure
Fitted Normal Distribution for protein

Quantiles for Normal Distribution		
	Quantile	
Percent	Observed	Estimated
95.0	5.03467	4.98911
99.0	5.36381	5.38961

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Assignment 5 Part 1 - Cereal

Cereal Analysis

part of the coeficients for each set of simulated dataset when distribution is normal

The UNIVARIATE Procedure
Variable: complex_carbs

Moments			
N	1000	**Sum Weights**	1000
Mean	4.00551065	**Sum Observations**	4005.51065
Std Deviation	0.17101979	**Variance**	0.02924777
Skewness	-0.0114558	**Kurtosis**	-0.1107543
Uncorrected SS	16073.3341	**Corrected SS**	29.2185213
Coeff Variation	4.26961271	**Std Error Mean**	0.00540812

Basic Statistical Measures			
Location		**Variability**	
Mean	4.005511	**Std Deviation**	0.17102
Median	4.003778	**Variance**	0.02925
Mode	.	**Range**	1.09032
		Interquartile Range	0.23410

Tests for Location: Mu0=4				
Test	**Statistic**		**p Value**	
Student's t	**t**	1.018958	**Pr > |t|**	0.3085
Sign	**M**	13	**Pr >= |M|**	0.4292
Signed Rank	**S**	8251	**Pr >= |S|**	0.3667

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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is normal

The UNIVARIATE Procedure
Variable: complex_carbs

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	4.49926
99%	4.38797
95%	4.28773
90%	4.23053
75% Q3	4.12242
50% Median	4.00378
25% Q1	3.88831
10%	3.78054
5%	3.73715
1%	3.59250
0% Min	3.40895

Extreme Observations			
Lowest		**Highest**	
Value	**Obs**	**Value**	**Obs**
3.40895	643	4.43944	707
3.48775	291	4.43972	654
3.52027	920	4.45856	493
3.53239	241	4.46285	326
3.53950	578	4.49926	371

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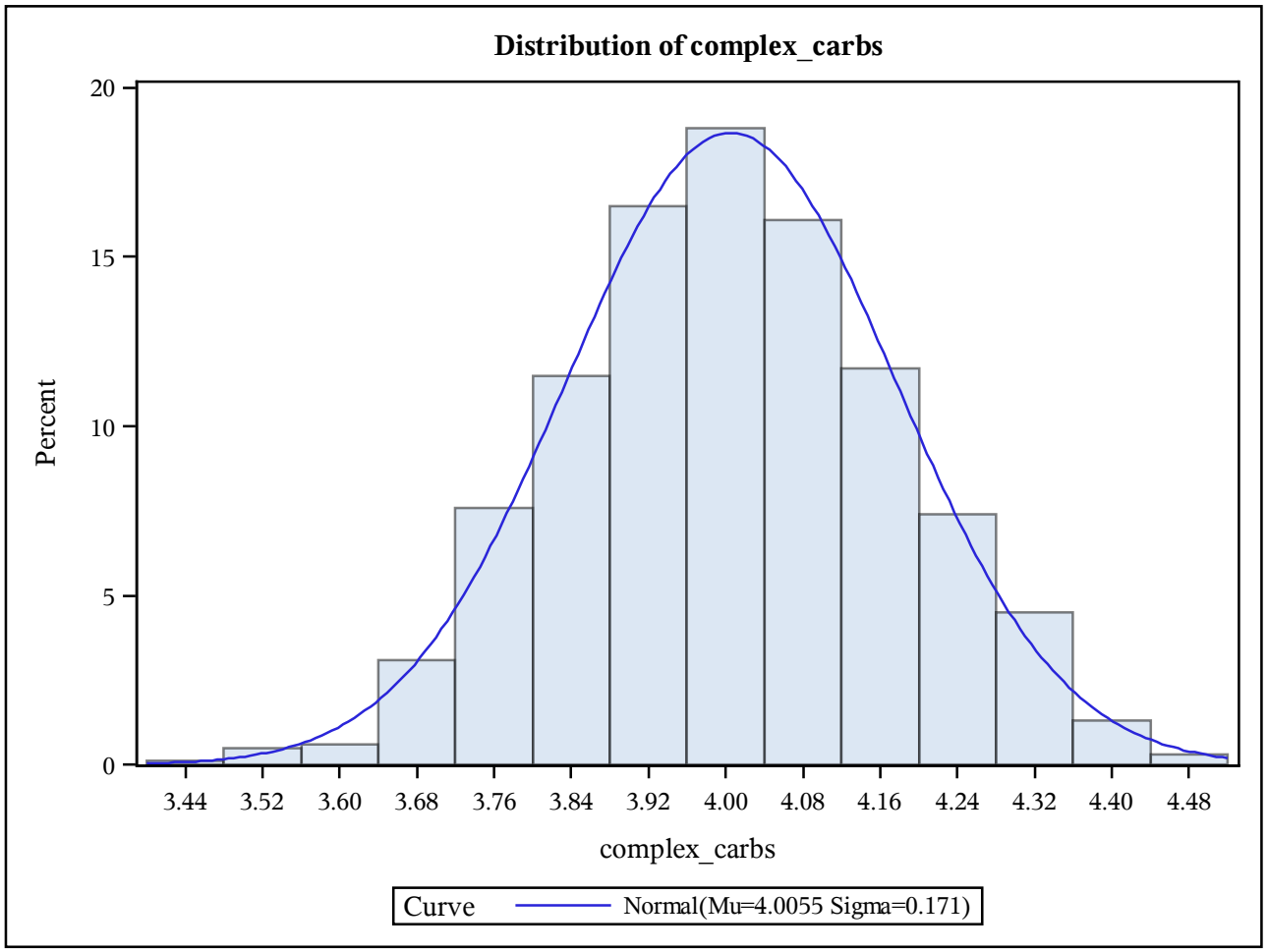
Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is normal

The UNIVARIATE Procedure



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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is normal

The UNIVARIATE Procedure
Fitted Normal Distribution for complex_carbs

Parameters for Normal Distribution		
Parameter	**Symbol**	**Estimate**
Mean	Mu	4.005511
Std Dev	Sigma	0.17102

Goodness-of-Fit Tests for Normal Distribution				
Test	**Statistic**		**p Value**	
Kolmogorov-Smirnov	**D**	0.01562667	**Pr > D**	>0.150
Cramer-von Mises	**W-Sq**	0.04162771	**Pr > W-Sq**	>0.250
Anderson-Darling	**A-Sq**	0.29756332	**Pr > A-Sq**	>0.250

Quantiles for Normal Distribution		
	Quantile	
Percent	**Observed**	**Estimated**
1.0	3.59250	3.60766
5.0	3.73715	3.72421
10.0	3.78054	3.78634
25.0	3.88831	3.89016
50.0	4.00378	4.00551
75.0	4.12242	4.12086
90.0	4.23053	4.22468

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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is normal

The UNIVARIATE Procedure
Fitted Normal Distribution for complex_carbs

Quantiles for Normal Distribution		
	Quantile	
Percent	Observed	Estimated
95.0	4.28773	4.28681
99.0	4.38797	4.40336

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Assignment 5 Part 1 - Cereal

Cereal Analysis

part of the coeficients for each set of simulated dataset when distribution is normal

The UNIVARIATE Procedure
Variable: sugars

Moments			
N	1000	**Sum Weights**	1000
Mean	4.00235022	**Sum Observations**	4002.35022
Std Deviation	0.16733751	**Variance**	0.02800184
Skewness	-0.0562705	**Kurtosis**	-0.1011203
Uncorrected SS	16046.7812	**Corrected SS**	27.9738391
Coeff Variation	4.18098109	**Std Error Mean**	0.00529168

Basic Statistical Measures			
Location		**Variability**	
Mean	4.002350	**Std Deviation**	0.16734
Median	4.001101	**Variance**	0.02800
Mode	.	**Range**	1.06169
		Interquartile Range	0.22734

Tests for Location: Mu0=4				
Test	**Statistic**		**p Value**	
Student's t	**t**	0.444136	**Pr > |t|**	0.6570
Sign	**M**	2	**Pr >= |M|**	0.9244
Signed Rank	**S**	5451	**Pr >= |S|**	0.5510

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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is normal

The UNIVARIATE Procedure
Variable: sugars

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	4.49011
99%	4.37610
95%	4.27576
90%	4.21502
75% Q3	4.11954
50% Median	4.00110
25% Q1	3.89220
10%	3.78628
5%	3.73044
1%	3.62645
0% Min	3.42842

Extreme Observations			
Lowest		**Highest**	
Value	**Obs**	**Value**	**Obs**
3.42842	920	4.42703	700
3.49778	191	4.42763	915
3.53714	241	4.46532	596
3.54581	69	4.48804	675
3.56213	643	4.49011	77

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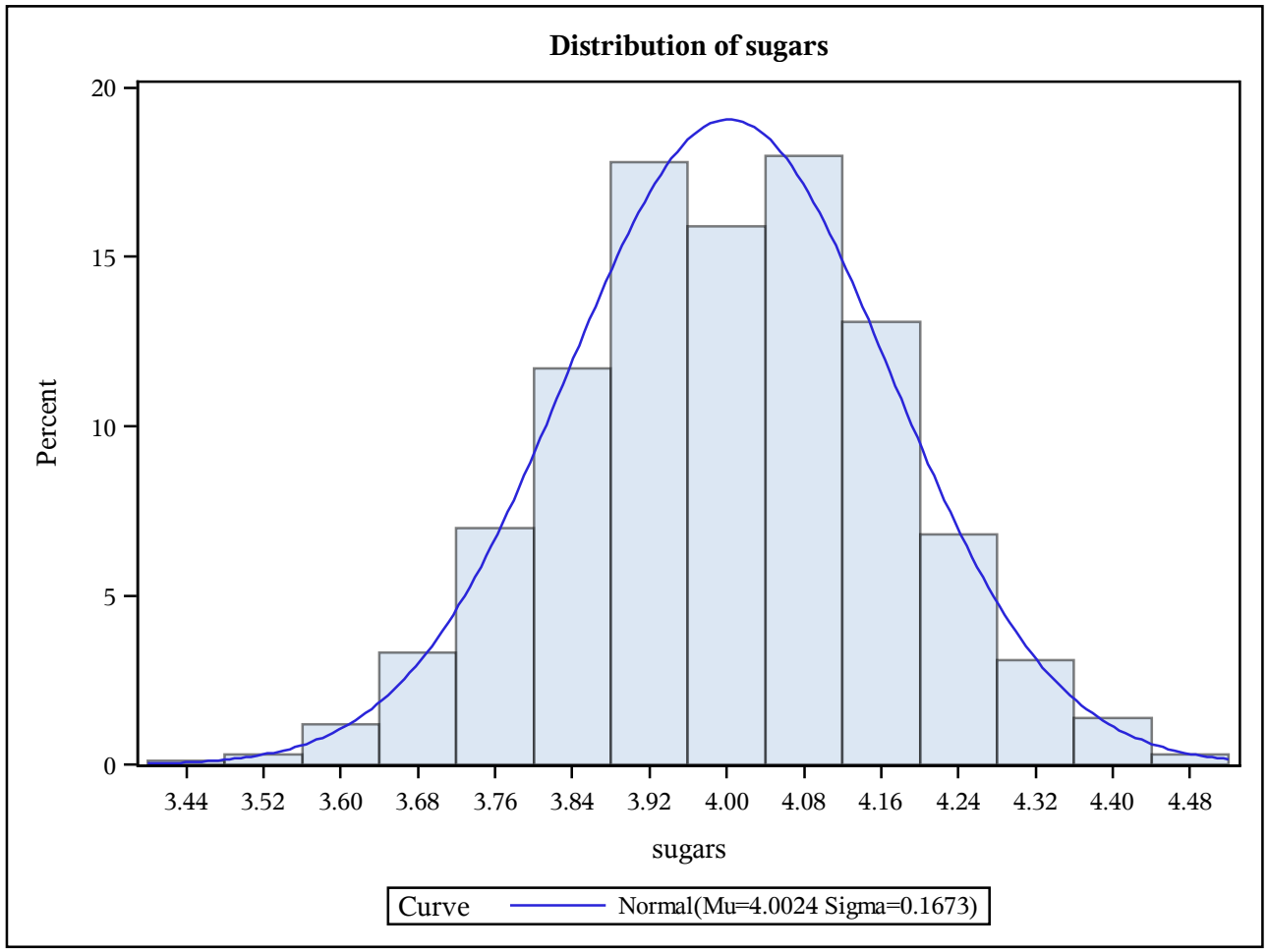
Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is normal

The UNIVARIATE Procedure



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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is normal

The UNIVARIATE Procedure
Fitted Normal Distribution for sugars

Parameters for Normal Distribution		
Parameter	**Symbol**	**Estimate**
Mean	Mu	4.00235
Std Dev	Sigma	0.167338

Goodness-of-Fit Tests for Normal Distribution				
Test	**Statistic**		**p Value**	
Kolmogorov-Smirnov	**D**	0.01991310	**Pr > D**	>0.150
Cramer-von Mises	**W-Sq**	0.05076110	**Pr > W-Sq**	>0.250
Anderson-Darling	**A-Sq**	0.28043321	**Pr > A-Sq**	>0.250

Quantiles for Normal Distribution		
	Quantile	
Percent	**Observed**	**Estimated**
1.0	3.62645	3.61306
5.0	3.73044	3.72710
10.0	3.78628	3.78790
25.0	3.89220	3.88948
50.0	4.00110	4.00235
75.0	4.11954	4.11522
90.0	4.21502	4.21680

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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is normal

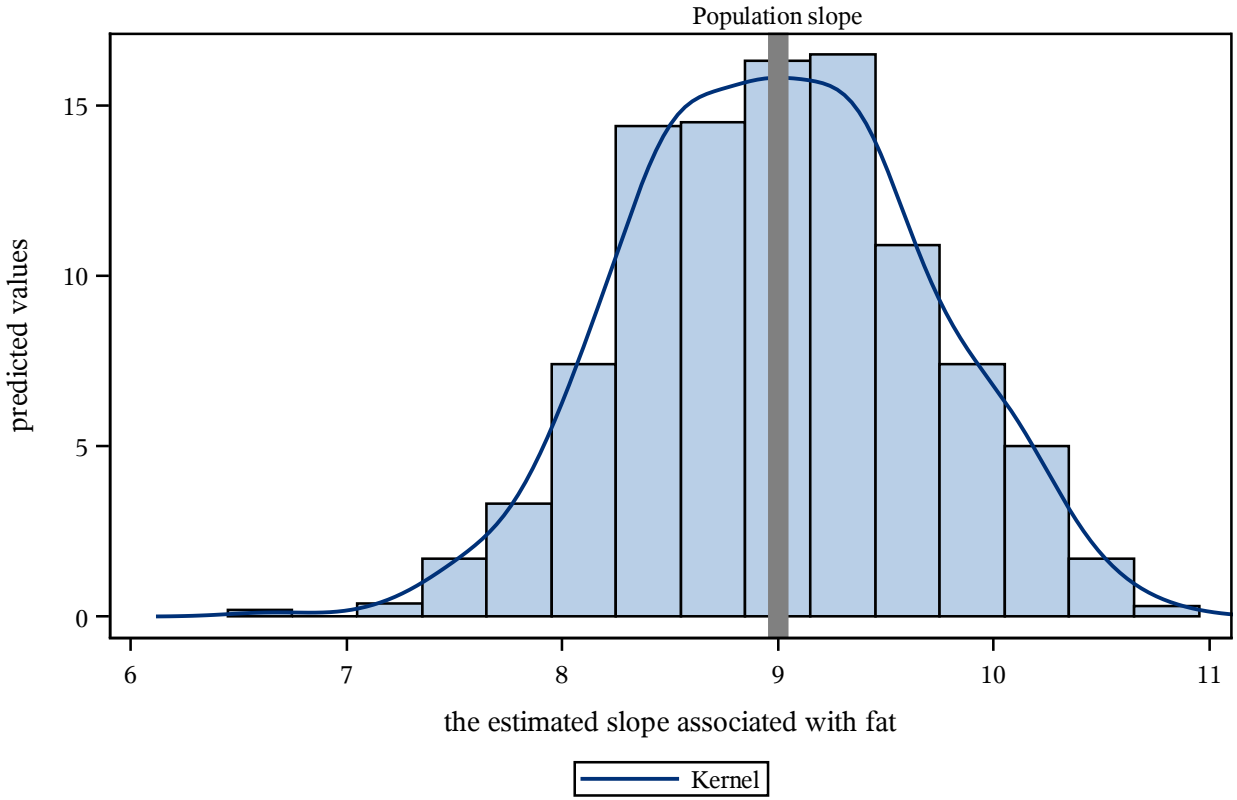
The UNIVARIATE Procedure
Fitted Normal Distribution for sugars

Quantiles for Normal Distribution		
	Quantile	
Percent	Observed	Estimated
95.0	4.27576	4.27760
99.0	4.37610	4.39164

Yang, Kun 301178299 **Assignment 5 Part 1 - Cereal**

Cereal Analysis

the sampling distribution of the estimated slope associated with fat when normality is satisfied



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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the simulated data

Obs	sim	protein	fat	complex_carbs	sugars	mu_calories	W	epsilon	calories
1	1	4	1	5.0	6	69	0.88230	-0.35463	68.645
2	1	3	5	8.0	8	121	2.31893	0.31011	121.310
3	1	4	1	7.0	5	73	0.94878	-0.32387	72.676
4	1	4	0	8.0	0	48	0.18780	-0.67598	47.324
5	1	2	2	14.0	8	114	0.55437	-0.50636	113.494
6	1	2	2	10.5	10	108	0.57027	-0.49901	107.501
7	1	2	0	11.0	14	108	2.56648	0.42465	108.425
8	1	3	2	18.0	8	134	0.72036	-0.42956	133.570
9	1	2	1	15.0	6	101	0.91681	-0.33866	100.661
10	1	3	0	13.0	5	84	1.60332	-0.02101	83.979

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Assignment 5 Part 1 - Cereal

Cereal Analysis

part of the coeficients for each set of simulated dataset when distribution is not normal

Obs	sim	_MODEL_	_TYPE_	_DEPVAR_	_RMSE_	Intercept	fat	protein	complex_carbs	sugars	calories
1	1	MODEL1	PARMS	calories	0.74420	0.37025	9.02573	3.92272	3.97786	3.99644	-1
2	2	MODEL1	PARMS	calories	0.61860	0.09994	8.93428	3.94017	3.99680	4.01114	-1
3	3	MODEL1	PARMS	calories	0.69231	0.13361	8.91833	3.96349	3.99921	3.98239	-1
4	4	MODEL1	PARMS	calories	0.54807	-0.32398	9.06519	4.01981	3.99820	4.01007	-1
5	5	MODEL1	PARMS	calories	0.86688	1.04185	8.94305	3.78290	3.97626	3.99261	-1
6	6	MODEL1	PARMS	calories	0.67845	-0.37365	9.07464	3.91701	4.02541	4.01354	-1
7	7	MODEL1	PARMS	calories	0.75620	-0.08882	9.23147	3.95738	4.00070	3.99148	-1
8	8	MODEL1	PARMS	calories	0.77514	0.68022	9.38077	3.82986	3.96599	3.97915	-1
9	9	MODEL1	PARMS	calories	1.83400	2.87633	9.07472	3.82660	3.90898	3.87589	-1
10	10	MODEL1	PARMS	calories	1.05271	1.30082	9.03738	3.84318	3.97929	3.92051	-1

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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is not normal

The UNIVARIATE Procedure
Variable: Intercept (Intercept)

Moments			
N	1000	**Sum Weights**	1000
Mean	-0.0131627	**Sum Observations**	-13.162654
Std Deviation	0.80126461	**Variance**	0.64202498
Skewness	0.48389287	**Kurtosis**	5.23465841
Uncorrected SS	641.556209	**Corrected SS**	641.382954
Coeff Variation	-6087.409	**Std Error Mean**	0.02533821

Basic Statistical Measures			
Location		**Variability**	
Mean	-0.01316	**Std Deviation**	0.80126
Median	-0.04306	**Variance**	0.64202
Mode	.	**Range**	9.91067
		Interquartile Range	0.84773

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	-0.51948	**Pr > |t|**	0.6035
Sign	**M**	-25	**Pr >= |M|**	0.1212
Signed Rank	**S**	-9189	**Pr >= |S|**	0.3147

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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is not normal

The UNIVARIATE Procedure
Variable: Intercept (Intercept)

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	5.6018673
99%	2.1675663
95%	1.2004447
90%	0.8980662
75% Q3	0.4041321
50% Median	-0.0430556
25% Q1	-0.4436013
10%	-0.9047150
5%	-1.1826109
1%	-1.9385213
0% Min	-4.3088008

Extreme Observations			
Lowest		**Highest**	
Value	**Obs**	**Value**	**Obs**
-4.30880	359	3.14826	458
-3.35357	371	3.55497	719
-2.84128	781	3.93736	750
-2.76748	844	4.11670	381
-2.50931	44	5.60187	504

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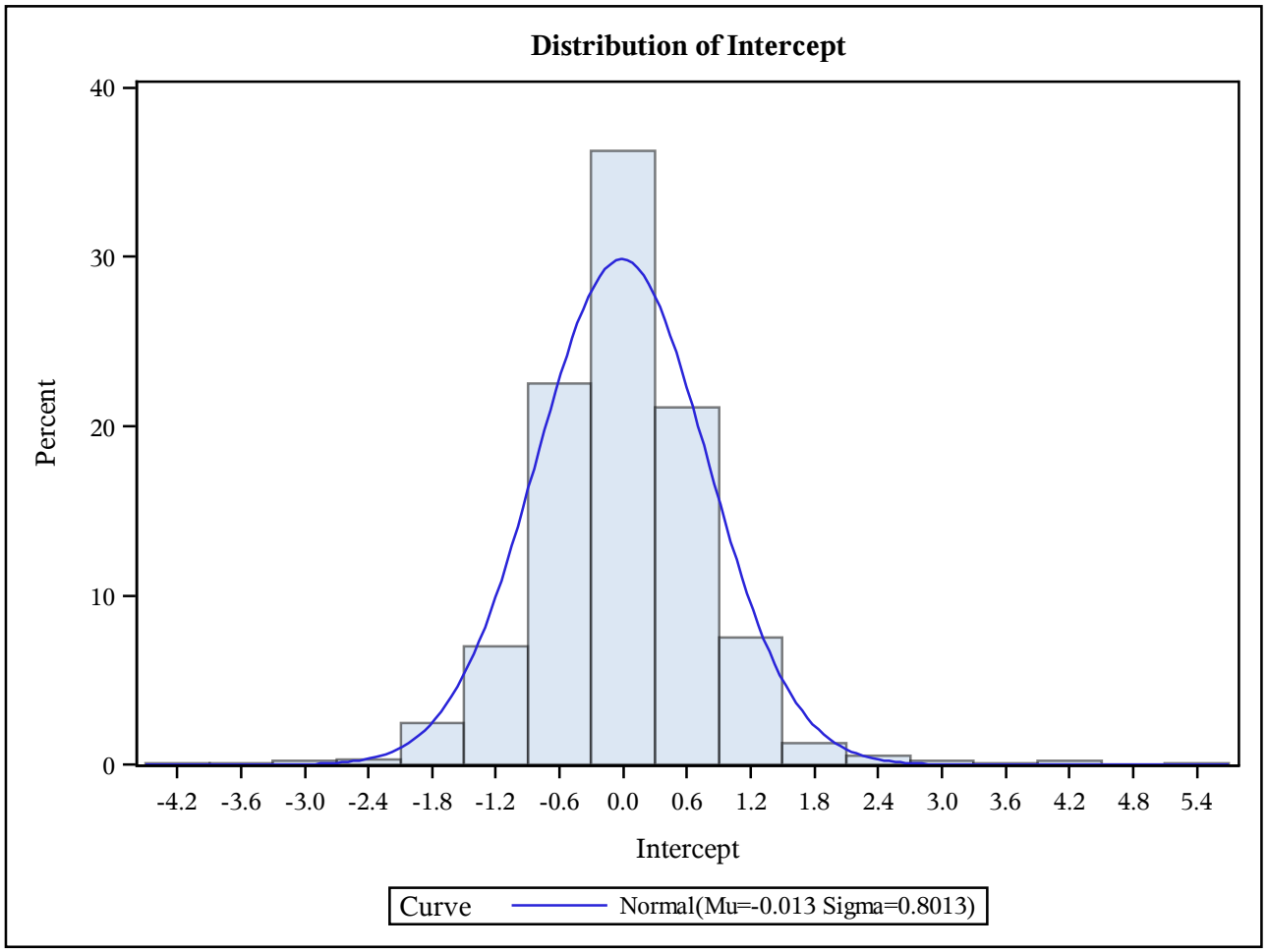
Assignment 5 Part 1 - Cereal

Cereal Analysis

part of the coeficients for each set of simulated dataset when distribution is not normal

The UNIVARIATE Procedure



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Assignment 5 Part 1 - Cereal

Cereal Analysis

part of the coeficients for each set of simulated dataset when distribution is not normal

The UNIVARIATE Procedure
Fitted Normal Distribution for Intercept (Intercept)

Parameters for Normal Distribution		
Parameter	**Symbol**	**Estimate**
Mean	Mu	-0.01316
Std Dev	Sigma	0.801265

Goodness-of-Fit Tests for Normal Distribution				
Test	**Statistic**		**p Value**	
Kolmogorov-Smirnov	**D**	0.05831094	**Pr > D**	<0.010
Cramer-von Mises	**W-Sq**	1.09369415	**Pr > W-Sq**	<0.005
Anderson-Darling	**A-Sq**	6.74179753	**Pr > A-Sq**	<0.005

Quantiles for Normal Distribution		
	Quantile	
Percent	**Observed**	**Estimated**
1.0	-1.93852	-1.87718
5.0	-1.18261	-1.33113
10.0	-0.90472	-1.04002
25.0	-0.44360	-0.55361
50.0	-0.04306	-0.01316
75.0	0.40413	0.52728
90.0	0.89807	1.01370

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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is not normal

The UNIVARIATE Procedure
Fitted Normal Distribution for Intercept (Intercept)

Quantiles for Normal Distribution		
	Quantile	
Percent	Observed	Estimated
95.0	1.20044	1.30480
99.0	2.16757	1.85086

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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is not normal

The UNIVARIATE Procedure
Variable: fat

Moments			
N	1000	**Sum Weights**	1000
Mean	9.00300989	**Sum Observations**	9003.00989
Std Deviation	0.13489276	**Variance**	0.01819606
Skewness	0.5164344	**Kurtosis**	2.14326214
Uncorrected SS	81072.365	**Corrected SS**	18.17786
Coeff Variation	1.49830734	**Std Error Mean**	0.00426568

Basic Statistical Measures			
Location		**Variability**	
Mean	9.003010	**Std Deviation**	0.13489
Median	8.991407	**Variance**	0.01820
Mode	.	**Range**	1.31245
		Interquartile Range	0.15966

Tests for Location: Mu0=9				
Test	**Statistic**		**p Value**	
Student's t	**t**	0.705606	**Pr > |t|**	0.4806
Sign	**M**	-35	**Pr >= |M|**	0.0291
Signed Rank	**S**	-6906	**Pr >= |S|**	0.4500

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Assignment 5 Part 1 - Cereal

Cereal Analysis

part of the coeficients for each set of simulated dataset when distribution is not normal

The UNIVARIATE Procedure
Variable: fat

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	9.73253
99%	9.37800
95%	9.23897
90%	9.17281
75% Q3	9.07822
50% Median	8.99141
25% Q1	8.91856
10%	8.85173
5%	8.79620
1%	8.71785
0% Min	8.42008

Extreme Observations			
Lowest		**Highest**	
Value	**Obs**	**Value**	**Obs**
8.42008	599	9.45203	683
8.49598	44	9.45526	334
8.52684	504	9.45812	717
8.63880	280	9.66762	981
8.65867	775	9.73253	740

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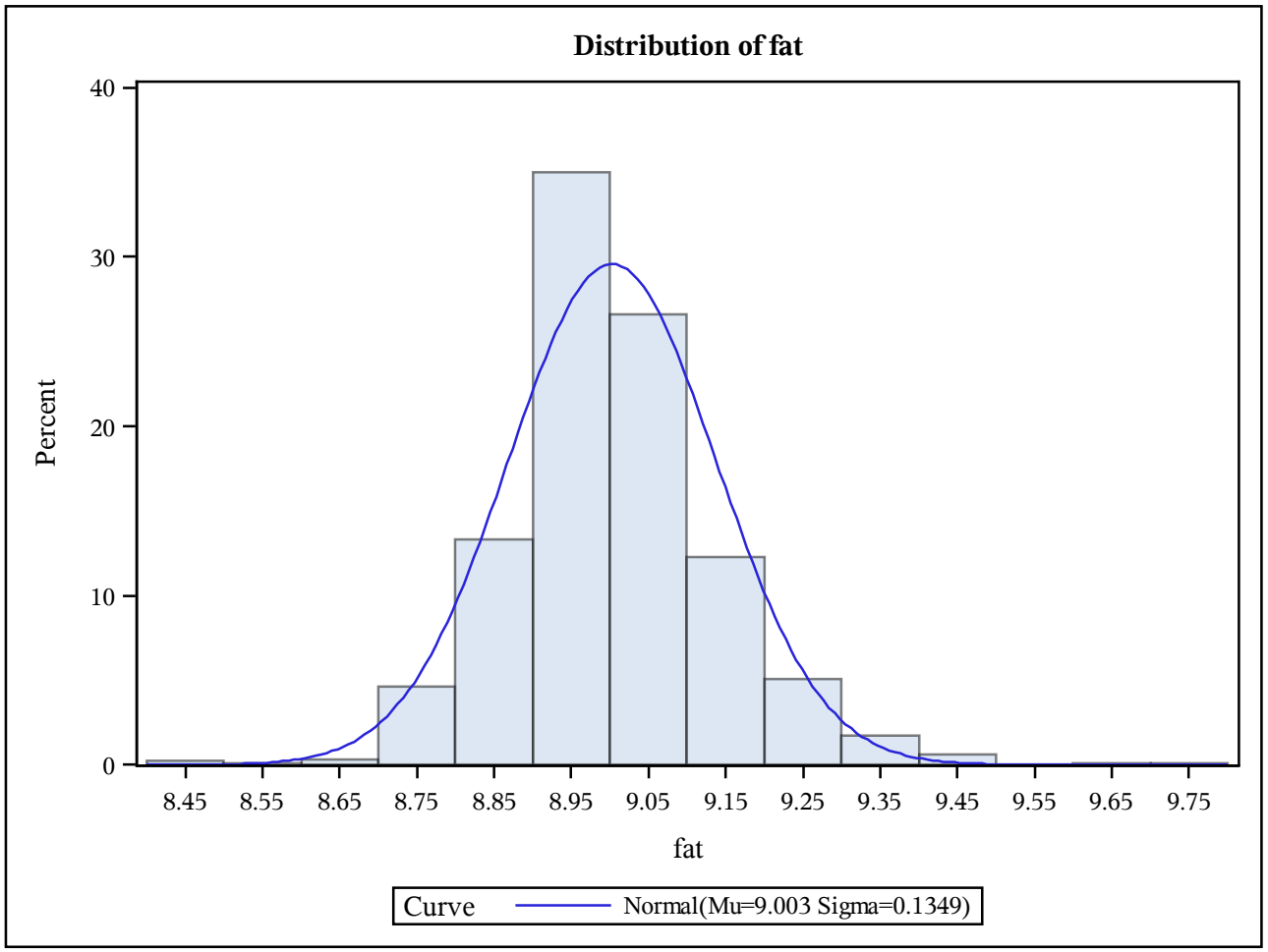
Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is not normal

The UNIVARIATE Procedure



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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is not normal

The UNIVARIATE Procedure
Fitted Normal Distribution for fat

Parameters for Normal Distribution		
Parameter	**Symbol**	**Estimate**
Mean	Mu	9.00301
Std Dev	Sigma	0.134893

Goodness-of-Fit Tests for Normal Distribution				
Test	**Statistic**		**p Value**	
Kolmogorov-Smirnov	**D**	0.05638511	**Pr > D**	<0.010
Cramer-von Mises	**W-Sq**	1.01240215	**Pr > W-Sq**	<0.005
Anderson-Darling	**A-Sq**	5.72961091	**Pr > A-Sq**	<0.005

Quantiles for Normal Distribution		
	Quantile	
Percent	**Observed**	**Estimated**
1.0	8.71785	8.68920
5.0	8.79620	8.78113
10.0	8.85173	8.83014
25.0	8.91856	8.91203
50.0	8.99141	9.00301
75.0	9.07822	9.09399
90.0	9.17281	9.17588

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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is not normal

The UNIVARIATE Procedure
Fitted Normal Distribution for fat

Quantiles for Normal Distribution		
	Quantile	
Percent	Observed	Estimated
95.0	9.23897	9.22489
99.0	9.37800	9.31682

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Assignment 5 Part 1 - Cereal

Cereal Analysis

part of the coeficients for each set of simulated dataset when distribution is not normal

The UNIVARIATE Procedure
Variable: protein

Moments			
N	1000	**Sum Weights**	1000
Mean	4.0040397	**Sum Observations**	4004.0397
Std Deviation	0.11763075	**Variance**	0.01383699
Skewness	0.82906935	**Kurtosis**	4.80069405
Uncorrected SS	16046.1571	**Corrected SS**	13.8231561
Coeff Variation	2.93780176	**Std Error Mean**	0.00371981

Basic Statistical Measures			
Location		**Variability**	
Mean	4.004040	**Std Deviation**	0.11763
Median	4.001782	**Variance**	0.01384
Mode	.	**Range**	1.33078
		Interquartile Range	0.13945

Tests for Location: Mu0=4				
Test	**Statistic**		**p Value**	
Student's t	**t**	1.085997	**Pr > |t|**	0.2777
Sign	**M**	5	**Pr >= |M|**	0.7760
Signed Rank	**S**	2460	**Pr >= |S|**	0.7879

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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is not normal

The UNIVARIATE Procedure
Variable: protein

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	4.94191
99%	4.32098
95%	4.19396
90%	4.14031
75% Q3	4.07058
50% Median	4.00178
25% Q1	3.93113
10%	3.86015
5%	3.82702
1%	3.74461
0% Min	3.61113

Extreme Observations			
Lowest		**Highest**	
Value	**Obs**	**Value**	**Obs**
3.61113	805	4.38461	141
3.66980	748	4.38623	67
3.68137	657	4.42666	469
3.71089	36	4.62323	490
3.71530	683	4.94191	44

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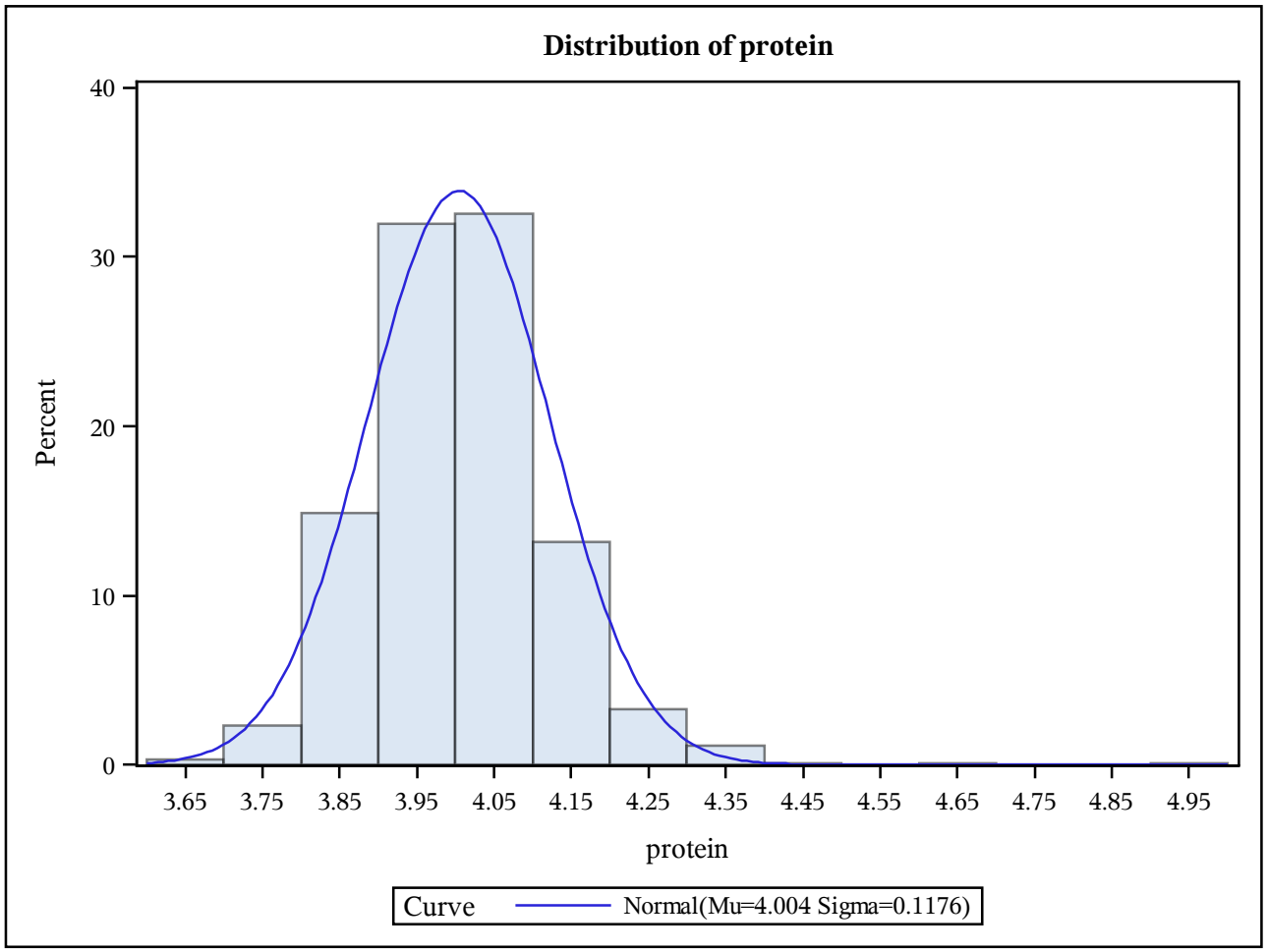
Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is not normal

The UNIVARIATE Procedure



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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is not normal

The UNIVARIATE Procedure
Fitted Normal Distribution for protein

Parameters for Normal Distribution		
Parameter	**Symbol**	**Estimate**
Mean	Mu	4.00404
Std Dev	Sigma	0.117631

Goodness-of-Fit Tests for Normal Distribution				
Test	**Statistic**		**p Value**	
Kolmogorov-Smirnov	**D**	0.04387470	**Pr > D**	<0.010
Cramer-von Mises	**W-Sq**	0.43926563	**Pr > W-Sq**	<0.005
Anderson-Darling	**A-Sq**	2.81341979	**Pr > A-Sq**	<0.005

Quantiles for Normal Distribution		
	Quantile	
Percent	**Observed**	**Estimated**
1.0	3.74461	3.73039
5.0	3.82702	3.81055
10.0	3.86015	3.85329
25.0	3.93113	3.92470
50.0	4.00178	4.00404
75.0	4.07058	4.08338
90.0	4.14031	4.15479

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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is not normal

The UNIVARIATE Procedure
Fitted Normal Distribution for protein

Quantiles for Normal Distribution		
	Quantile	
Percent	Observed	Estimated
95.0	4.19396	4.19753
99.0	4.32098	4.27769

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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is not normal

The UNIVARIATE Procedure
Variable: complex_carbs

Moments			
N	1000	**Sum Weights**	1000
Mean	4.00036522	**Sum Observations**	4000.36522
Std Deviation	0.0360112	**Variance**	0.00129681
Skewness	-0.1261279	**Kurtosis**	5.23822878
Uncorrected SS	16004.2174	**Corrected SS**	1.29550974
Coeff Variation	0.90019781	**Std Error Mean**	0.00113877

Basic Statistical Measures			
Location		**Variability**	
Mean	4.000365	**Std Deviation**	0.03601
Median	4.000799	**Variance**	0.00130
Mode	.	**Range**	0.44154
		Interquartile Range	0.03754

Tests for Location: Mu0=4				
Test	**Statistic**		**p Value**	
Student's t	**t**	0.320713	**Pr > |t|**	0.7485
Sign	**M**	7	**Pr >= |M|**	0.6810
Signed Rank	**S**	6984	**Pr >= |S|**	0.4449

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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is not normal

The UNIVARIATE Procedure
Variable: complex_carbs

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	4.20918
99%	4.09933
95%	4.05332
90%	4.04059
75% Q3	4.01991
50% Median	4.00080
25% Q1	3.98237
10%	3.96277
5%	3.94461
1%	3.89801
0% Min	3.76764

Extreme Observations			
Lowest		**Highest**	
Value	**Obs**	**Value**	**Obs**
3.76764	504	4.11213	406
3.82231	381	4.13146	493
3.86838	750	4.16698	781
3.87466	79	4.19796	359
3.87566	458	4.20918	371

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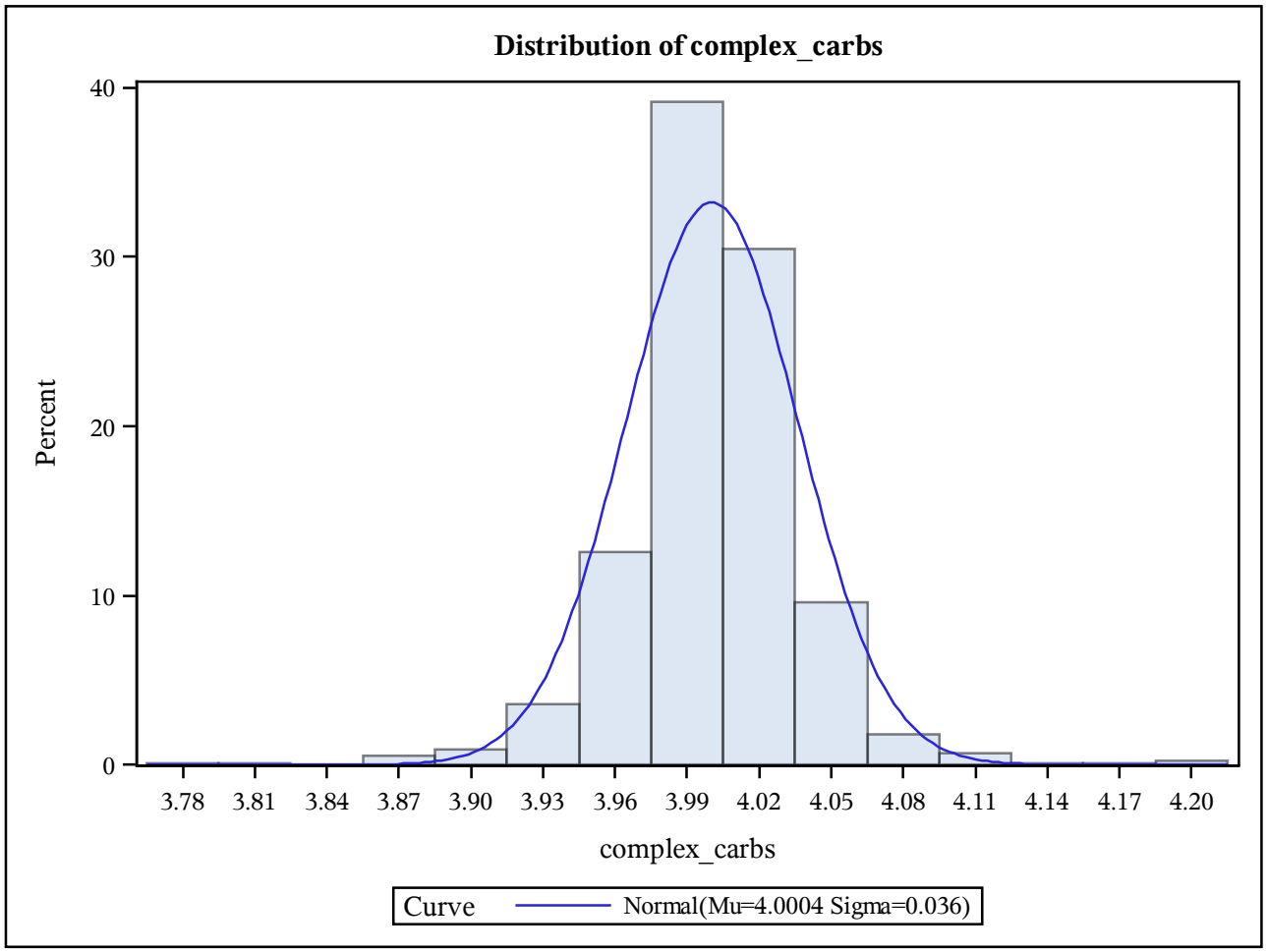
Assignment 5 Part 1 - Cereal

Cereal Analysis

part of the coeficients for each set of simulated dataset when distribution is not normal

The UNIVARIATE Procedure



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Assignment 5 Part 1 - Cereal

Cereal Analysis

part of the coeficients for each set of simulated dataset when distribution is not normal

The UNIVARIATE Procedure
Fitted Normal Distribution for complex_carbs

Parameters for Normal Distribution		
Parameter	**Symbol**	**Estimate**
Mean	Mu	4.000365
Std Dev	Sigma	0.036011

Goodness-of-Fit Tests for Normal Distribution				
Test	**Statistic**		**p Value**	
Kolmogorov-Smirnov	**D**	0.06677145	**Pr > D**	<0.010
Cramer-von Mises	**W-Sq**	1.42070046	**Pr > W-Sq**	<0.005
Anderson-Darling	**A-Sq**	8.74641988	**Pr > A-Sq**	<0.005

Quantiles for Normal Distribution		
	Quantile	
Percent	**Observed**	**Estimated**
1.0	3.89801	3.91659
5.0	3.94461	3.94113
10.0	3.96277	3.95422
25.0	3.98237	3.97608
50.0	4.00080	4.00037
75.0	4.01991	4.02465
90.0	4.04059	4.04652

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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is not normal

The UNIVARIATE Procedure
Fitted Normal Distribution for complex_carbs

Quantiles for Normal Distribution		
	Quantile	
Percent	Observed	Estimated
95.0	4.05332	4.05960
99.0	4.09933	4.08414

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Assignment 5 Part 1 - Cereal

Cereal Analysis

part of the coeficients for each set of simulated dataset when distribution is not normal

The UNIVARIATE Procedure
Variable: sugars

Moments			
N	1000	**Sum Weights**	1000
Mean	4.00016939	**Sum Observations**	4000.16939
Std Deviation	0.03384902	**Variance**	0.00114576
Skewness	-0.1871968	**Kurtosis**	1.84232902
Uncorrected SS	16002.4997	**Corrected SS**	1.1446105
Coeff Variation	0.8461897	**Std Error Mean**	0.0010704

Basic Statistical Measures			
Location		**Variability**	
Mean	4.000169	**Std Deviation**	0.03385
Median	4.000537	**Variance**	0.00115
Mode	.	**Range**	0.33105
		Interquartile Range	0.03995

Tests for Location: Mu0=4				
Test	**Statistic**		**p Value**	
Student's t	**t**	0.158246	**Pr > |t|**	0.8743
Sign	**M**	8	**Pr >= |M|**	0.6353
Signed Rank	**S**	4777	**Pr >= |S|**	0.6013

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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is not normal

The UNIVARIATE Procedure
Variable: sugars

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	4.17308
99%	4.08358
95%	4.05319
90%	4.04144
75% Q3	4.02050
50% Median	4.00054
25% Q1	3.98055
10%	3.96004
5%	3.94579
1%	3.90841
0% Min	3.84203

Extreme Observations			
Lowest		**Highest**	
Value	**Obs**	**Value**	**Obs**
3.84203	504	4.09316	359
3.86080	750	4.09378	973
3.86717	381	4.09714	993
3.87589	9	4.10511	844
3.88371	458	4.17308	599

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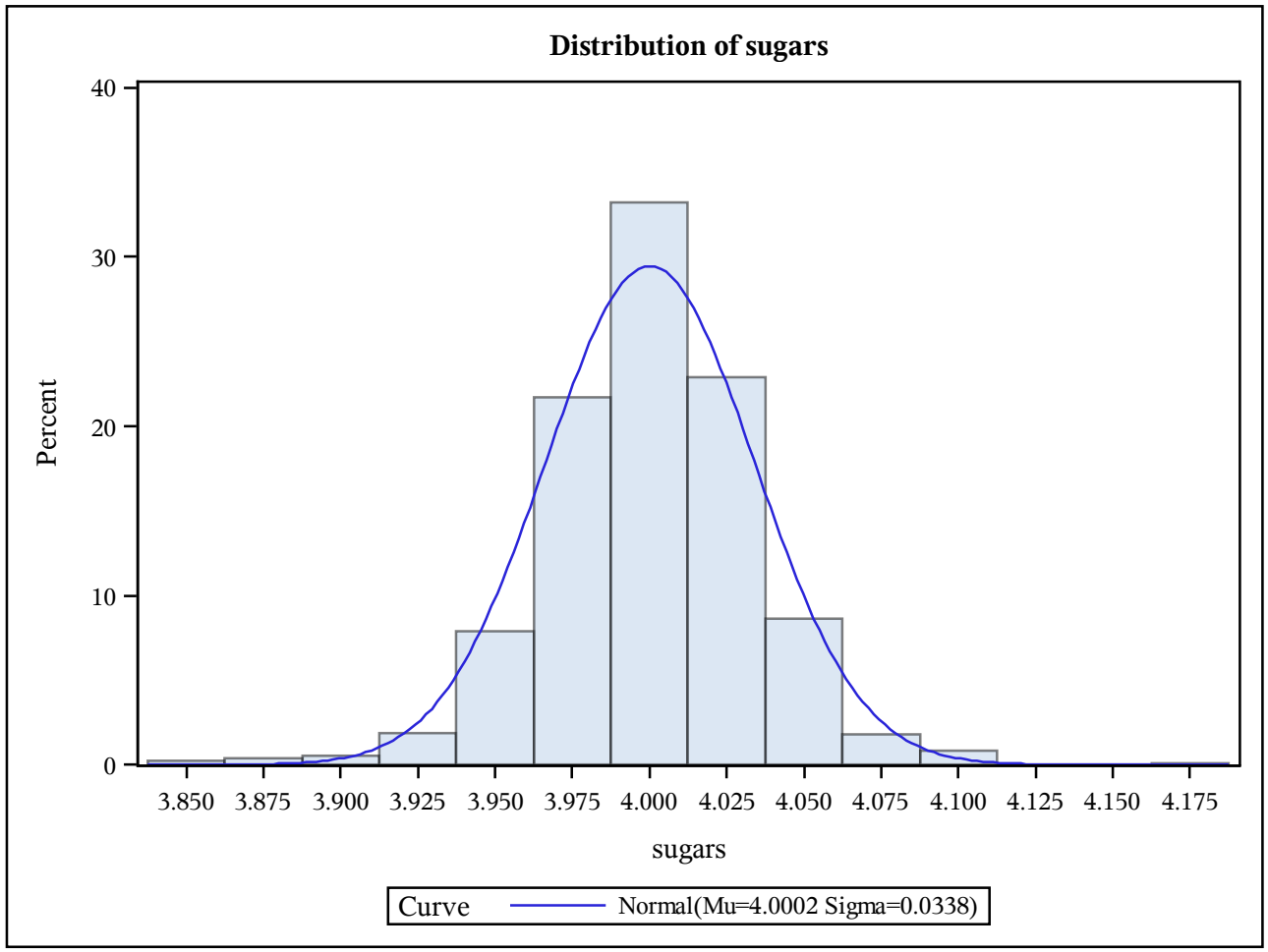
Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is not normal

The UNIVARIATE Procedure



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Assignment 5 Part 1 - Cereal

Cereal Analysis

part of the coeficients for each set of simulated dataset when distribution is not normal

The UNIVARIATE Procedure
Fitted Normal Distribution for sugars

Parameters for Normal Distribution		
Parameter	**Symbol**	**Estimate**
Mean	Mu	4.000169
Std Dev	Sigma	0.033849

Goodness-of-Fit Tests for Normal Distribution				
Test	**Statistic**		**p Value**	
Kolmogorov-Smirnov	**D**	0.03433318	**Pr > D**	<0.010
Cramer-von Mises	**W-Sq**	0.37001159	**Pr > W-Sq**	<0.005
Anderson-Darling	**A-Sq**	2.36847428	**Pr > A-Sq**	<0.005

Quantiles for Normal Distribution		
	Quantile	
Percent	**Observed**	**Estimated**
1.0	3.90841	3.92142
5.0	3.94579	3.94449
10.0	3.96004	3.95679
25.0	3.98055	3.97734
50.0	4.00054	4.00017
75.0	4.02050	4.02300
90.0	4.04144	4.04355

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Assignment 5 Part 1 - Cereal
Cereal Analysis
part of the coeficients for each set of simulated dataset when distribution is not normal

The UNIVARIATE Procedure
Fitted Normal Distribution for sugars

Quantiles for Normal Distribution		
	Quantile	
Percent	Observed	Estimated
95.0	4.05319	4.05585
99.0	4.08358	4.07891

Yang, Kun 301178299 **Assignment 5 Part 1 - Cereal**

Cereal Analysis

the sampling distribution of the estimated slope associated with fat when normality is not satisfied