

Experimenting with Histograms of the spectrogram images

* Sixteen hundred sentences expressing four emotions were processed. Two hundred sentences (from two actresses) were evaluated for each of the following emotions: **angry, happy, neutral and sad**.

There are 54 results for the KNN algorithm (Lazy IBk) running on weka, with the following variations:

- 3 colors (Red, Green and Blue)
- with 3 threshold values (50, 100 and 150)
- with k, the number of k nearest neighbors (1, 5 and 9)
- for the voices of two actresses (young and old)

* Each page below presents in its header the value of k used and the name of the processed file. The name of the processed file indicates the actress who spoke the phrase, the RGB color channel used and the threshold value.

=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 1 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_old_blue_100_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 1 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

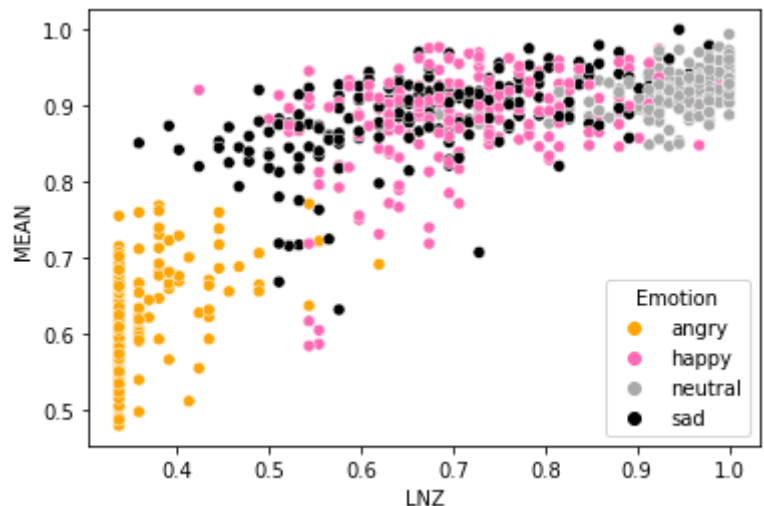
Correctly Classified Instances	547	68.375 %
Incorrectly Classified Instances	253	31.625 %
Kappa statistic	0.5783	
Mean absolute error	0.1593	
Root mean squared error	0.3966	
Relative absolute error	42.4852 %	
Root relative squared error	91.5808 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,975	0,008	0,975	0,975	0,975	0,967	0,983	0,957	angry
	0,495	0,168	0,495	0,495	0,495	0,327	0,665	0,372	happy
	0,775	0,072	0,783	0,775	0,779	0,706	0,852	0,663	neutral
	0,490	0,173	0,485	0,490	0,488	0,316	0,660	0,366	sad
Weighted Avg.	0,684	0,105	0,684	0,684	0,684	0,579	0,790	0,589	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
195	2	0	3	a = angry
0	99	23	78	b = happy
0	22	155	23	c = neutral
5	77	20	98	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 5 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_old_blue_100_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LN2
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 5 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

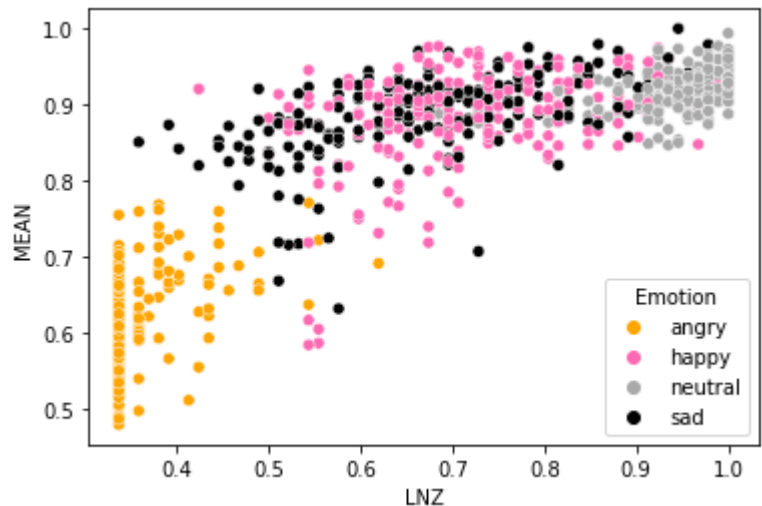
Correctly Classified Instances	555	69.375 %
Incorrectly Classified Instances	245	30.625 %
Kappa statistic	0.5917	
Mean absolute error	0.1642	
Root mean squared error	0.3141	
Relative absolute error	43.7734 %	
Root relative squared error	72.5409 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,975	0,007	0,980	0,975	0,977	0,970	0,994	0,987	angry
	0,510	0,187	0,477	0,510	0,493	0,316	0,786	0,462	happy
	0,875	0,065	0,818	0,875	0,845	0,792	0,956	0,844	neutral
	0,415	0,150	0,480	0,415	0,445	0,279	0,771	0,487	sad
Weighted Avg.	0,694	0,102	0,689	0,694	0,690	0,589	0,877	0,695	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
195	2	0	3	a = angry
0	102	19	79	b = happy
0	17	175	8	c = neutral
4	93	20	83	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 9 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_old_blue_100_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 9 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

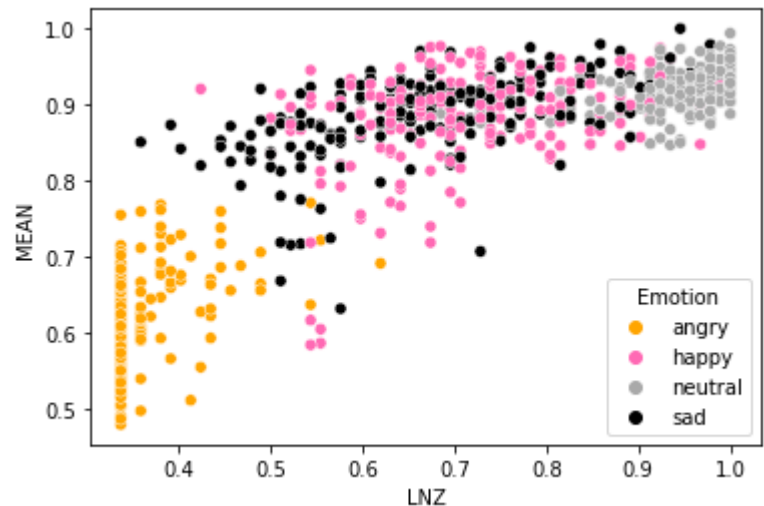
Correctly Classified Instances	555	69.375 %
Incorrectly Classified Instances	245	30.625 %
Kappa statistic	0.5917	
Mean absolute error	0.1662	
Root mean squared error	0.3061	
Relative absolute error	44.3232 %	
Root relative squared error	70.694 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,980	0,013	0,961	0,980	0,970	0,960	0,997	0,995	angry
	0,470	0,183	0,461	0,470	0,465	0,285	0,796	0,460	happy
	0,920	0,067	0,821	0,920	0,868	0,823	0,959	0,862	neutral
	0,405	0,145	0,482	0,405	0,440	0,276	0,793	0,521	sad
Weighted Avg.	0,694	0,102	0,681	0,694	0,686	0,586	0,886	0,709	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
196	3	0	1	a = angry
4	94	18	84	b = happy
0	14	184	2	c = neutral
4	93	22	81	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 1 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
\"weka.core.EuclideanDistance -R first-last\""
Relation: voice_old_blue_150_up-weka.filters.unsupervised.attribute.Remove-R1,3
Instances: 800
Attributes: 3
Emotion
MEAN
LNZ
Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
using 1 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

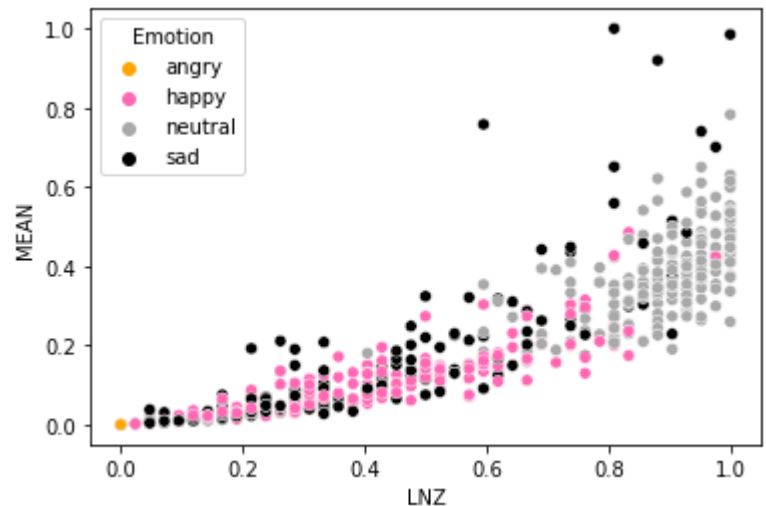
Correctly Classified Instances	517	64.625 %
Incorrectly Classified Instances	283	35.375 %
Kappa statistic	0.5283	
Mean absolute error	0.189	
Root mean squared error	0.4063	
Relative absolute error	50.3883 %	
Root relative squared error	93.8203 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,960	0,072	0,817	0,960	0,883	0,845	0,935	0,749	angry
	0,485	0,180	0,473	0,485	0,479	0,303	0,572	0,369	happy
	0,785	0,067	0,797	0,785	0,791	0,722	0,909	0,715	neutral
	0,355	0,153	0,436	0,355	0,391	0,217	0,588	0,344	sad
Weighted Avg.	0,646	0,118	0,631	0,646	0,636	0,521	0,751	0,544	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
192	5	0	3	a = angry
11	97	22	70	b = happy
0	24	157	19	c = neutral
32	79	18	71	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 5 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_old_blue_150_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 5 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

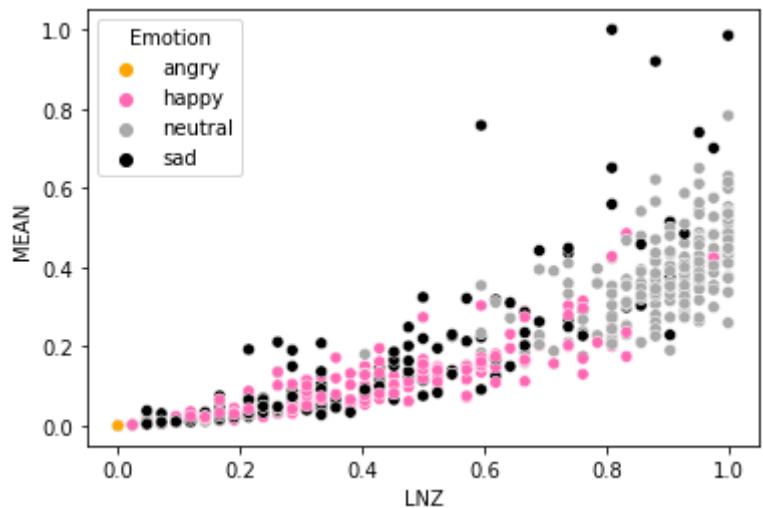
Correctly Classified Instances	551	68.875 %
Incorrectly Classified Instances	249	31.125 %
Kappa statistic	0.585	
Mean absolute error	0.1872	
Root mean squared error	0.3307	
Relative absolute error	49.9217 %	
Root relative squared error	76.3618 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,960	0,062	0,838	0,960	0,895	0,861	0,958	0,819	angry
	0,525	0,165	0,515	0,525	0,520	0,358	0,768	0,494	happy
	0,895	0,070	0,810	0,895	0,850	0,799	0,961	0,858	neutral
	0,375	0,118	0,514	0,375	0,434	0,288	0,737	0,462	sad
Weighted Avg.	0,689	0,104	0,669	0,689	0,675	0,576	0,856	0,658	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
192	5	0	3	a = angry
9	105	20	66	b = happy
0	19	179	2	c = neutral
28	75	22	75	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 9 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_old_blue_150_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 9 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

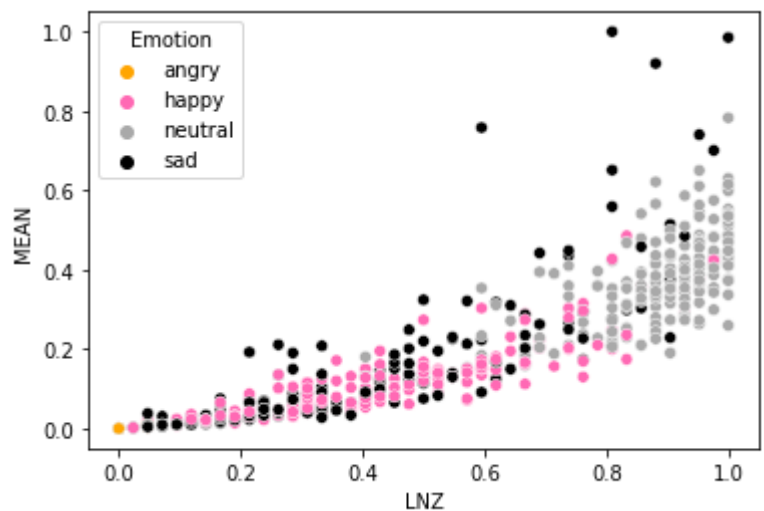
Correctly Classified Instances	565	70.625 %
Incorrectly Classified Instances	235	29.375 %
Kappa statistic	0.6083	
Mean absolute error	0.1887	
Root mean squared error	0.3232	
Relative absolute error	50.3174 %	
Root relative squared error	74.6461 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,960	0,057	0,850	0,960	0,901	0,869	0,960	0,822	angry
	0,580	0,157	0,552	0,580	0,566	0,417	0,809	0,516	happy
	0,900	0,063	0,826	0,900	0,861	0,814	0,962	0,867	neutral
	0,385	0,115	0,527	0,385	0,445	0,303	0,730	0,439	sad
Weighted Avg.	0,706	0,098	0,689	0,706	0,693	0,600	0,865	0,661	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
192	1	0	7	a = angry
8	116	18	58	b = happy
0	16	180	4	c = neutral
26	77	20	77	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 1 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_old_blue_50_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 1 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

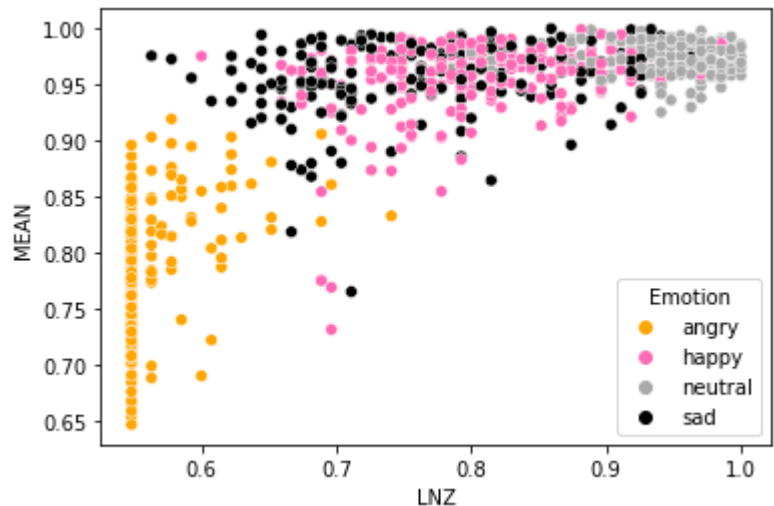
Correctly Classified Instances	570	71.25 %
Incorrectly Classified Instances	230	28.75 %
Kappa statistic	0.6167	
Mean absolute error	0.1453	
Root mean squared error	0.3783	
Relative absolute error	38.7559 %	
Root relative squared error	87.3673 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,975	0,003	0,990	0,975	0,982	0,977	0,986	0,972	angry
	0,525	0,160	0,522	0,525	0,524	0,364	0,684	0,392	happy
	0,850	0,062	0,821	0,850	0,835	0,779	0,894	0,736	neutral
	0,500	0,158	0,513	0,500	0,506	0,345	0,670	0,382	sad
Weighted Avg.	0,713	0,096	0,712	0,713	0,712	0,616	0,808	0,620	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
195	3	0	2	a = angry
1	105	19	75	b = happy
0	12	170	18	c = neutral
1	81	18	100	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 5 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_old_blue_50_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 5 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

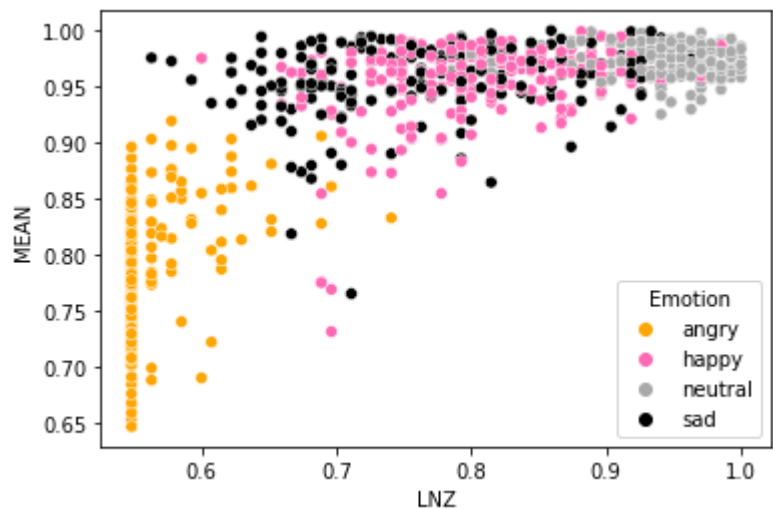
Correctly Classified Instances	574	71.75 %
Incorrectly Classified Instances	226	28.25 %
Kappa statistic	0.6233	
Mean absolute error	0.1593	
Root mean squared error	0.3093	
Relative absolute error	42.4861 %	
Root relative squared error	71.4367 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,975	0,002	0,995	0,975	0,985	0,980	0,995	0,992	angry
	0,560	0,183	0,505	0,560	0,531	0,364	0,799	0,475	happy
	0,880	0,068	0,811	0,880	0,844	0,791	0,951	0,873	neutral
	0,455	0,123	0,552	0,455	0,499	0,355	0,783	0,502	sad
Weighted Avg.	0,718	0,094	0,715	0,718	0,715	0,622	0,882	0,711	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
195	1	0	4	a = angry
0	112	22	66	b = happy
0	20	176	4	c = neutral
1	89	19	91	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 9 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_old_blue_50_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LN2
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 9 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

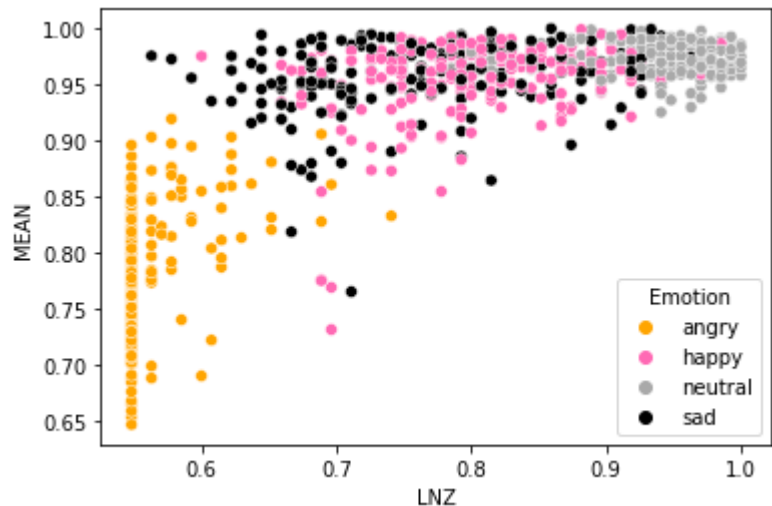
Correctly Classified Instances	574	71.75 %
Incorrectly Classified Instances	226	28.25 %
Kappa statistic	0.6233	
Mean absolute error	0.162	
Root mean squared error	0.2998	
Relative absolute error	43.2113 %	
Root relative squared error	69.2324 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,975	0,010	0,970	0,975	0,973	0,963	0,997	0,995	angry
	0,555	0,170	0,521	0,555	0,538	0,377	0,827	0,515	happy
	0,880	0,068	0,811	0,880	0,844	0,791	0,962	0,883	neutral
	0,460	0,128	0,544	0,460	0,499	0,352	0,802	0,526	sad
Weighted Avg.	0,718	0,094	0,712	0,718	0,713	0,621	0,897	0,730	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
195	1	0	4	a = angry
4	111	20	65	b = happy
0	16	176	8	c = neutral
2	85	21	92	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 1 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_old_green_100_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 1 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

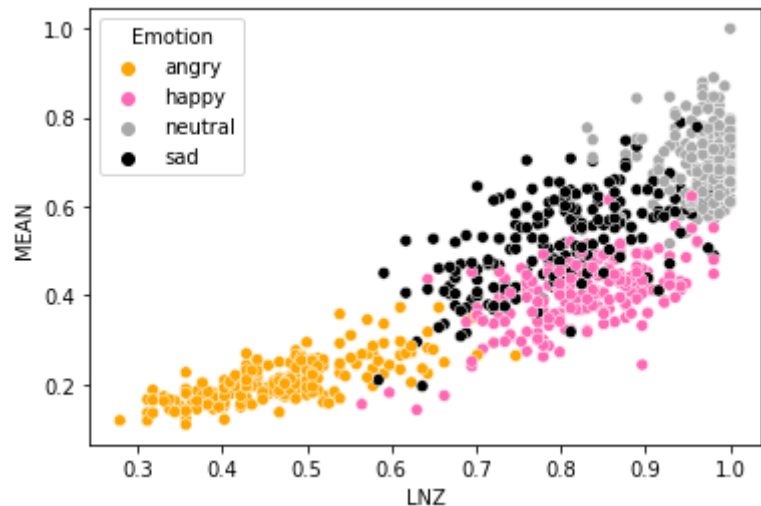
Correctly Classified Instances	638	79.75 %
Incorrectly Classified Instances	162	20.25 %
Kappa statistic	0.73	
Mean absolute error	0.1028	
Root mean squared error	0.3173	
Relative absolute error	27.403 %	
Root relative squared error	73.2835 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,940	0,017	0,949	0,940	0,945	0,926	0,962	0,908	angry
	0,740	0,085	0,744	0,740	0,742	0,656	0,828	0,615	happy
	0,865	0,053	0,844	0,865	0,854	0,805	0,906	0,764	neutral
	0,645	0,115	0,652	0,645	0,648	0,532	0,765	0,511	sad
Weighted Avg.	0,798	0,068	0,797	0,798	0,797	0,730	0,865	0,699	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
188	4	0	8	a = angry
7	148	6	39	b = happy
0	5	173	22	c = neutral
3	42	26	129	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 5 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_old_green_100_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
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 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 5 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

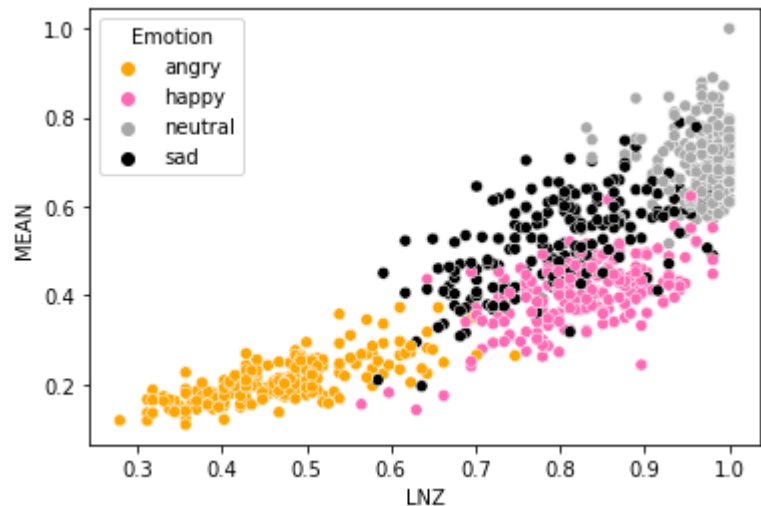
Correctly Classified Instances	681	85.125 %
Incorrectly Classified Instances	119	14.875 %
Kappa statistic	0.8017	
Mean absolute error	0.0993	
Root mean squared error	0.2431	
Relative absolute error	26.4816 %	
Root relative squared error	56.1326 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,970	0,015	0,956	0,970	0,963	0,950	0,993	0,984	angry
	0,840	0,080	0,778	0,840	0,808	0,741	0,937	0,813	happy
	0,925	0,042	0,881	0,925	0,902	0,869	0,973	0,903	neutral
	0,670	0,062	0,784	0,670	0,722	0,643	0,878	0,721	sad
Weighted Avg.	0,851	0,050	0,850	0,851	0,849	0,801	0,945	0,855	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
194	4	0	2	a = angry
4	168	5	23	b = happy
0	3	185	12	c = neutral
5	41	20	134	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 9 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_old_green_100_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
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 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 9 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

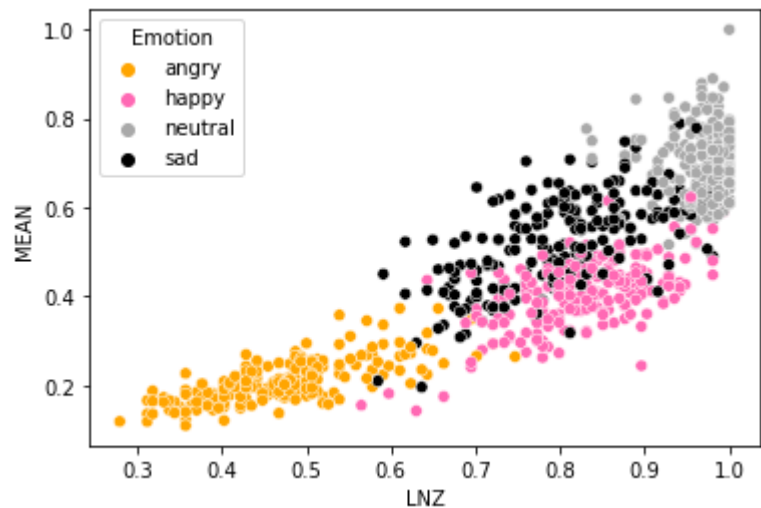
Correctly Classified Instances	678	84.75 %
Incorrectly Classified Instances	122	15.25 %
Kappa statistic	0.7967	
Mean absolute error	0.1004	
Root mean squared error	0.2348	
Relative absolute error	26.7841 %	
Root relative squared error	54.2287 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,965	0,017	0,951	0,965	0,958	0,944	0,994	0,989	angry
	0,820	0,082	0,770	0,820	0,794	0,723	0,948	0,839	happy
	0,950	0,043	0,880	0,950	0,913	0,884	0,979	0,927	neutral
	0,655	0,062	0,780	0,655	0,712	0,631	0,899	0,752	sad
Weighted Avg.	0,848	0,051	0,845	0,848	0,844	0,796	0,955	0,877	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
193	4	0	3	a = angry
6	164	4	26	b = happy
0	2	190	8	c = neutral
4	43	22	131	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 1 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_old_green_150_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 1 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

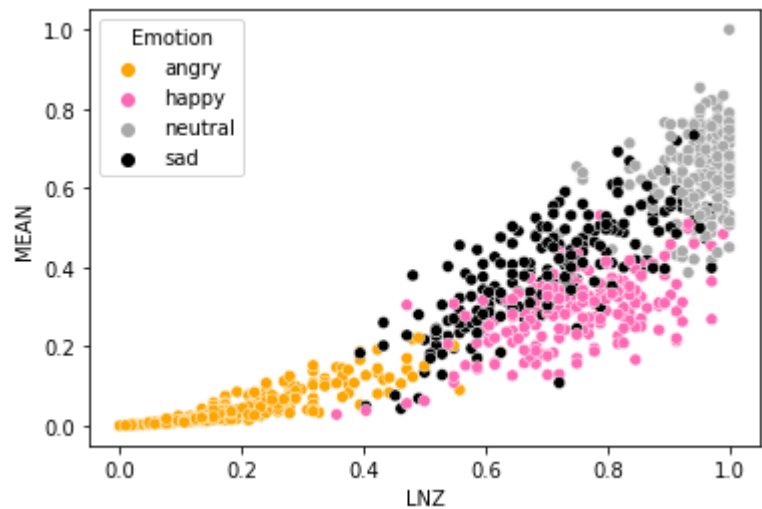
Correctly Classified Instances	598	74.75 %
Incorrectly Classified Instances	202	25.25 %
Kappa statistic	0.6633	
Mean absolute error	0.1279	
Root mean squared error	0.3546	
Relative absolute error	34.1121 %	
Root relative squared error	81.8826 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,945	0,020	0,940	0,945	0,943	0,923	0,963	0,904	angry
	0,695	0,112	0,675	0,695	0,685	0,578	0,795	0,549	happy
	0,855	0,055	0,838	0,855	0,847	0,795	0,901	0,755	neutral
	0,495	0,150	0,524	0,495	0,509	0,352	0,677	0,387	sad
Weighted Avg.	0,748	0,084	0,744	0,748	0,746	0,662	0,834	0,649	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
189	1	0	10	a = angry
2	139	5	54	b = happy
0	3	171	26	c = neutral
10	63	28	99	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 5 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_old_green_150_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 5 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

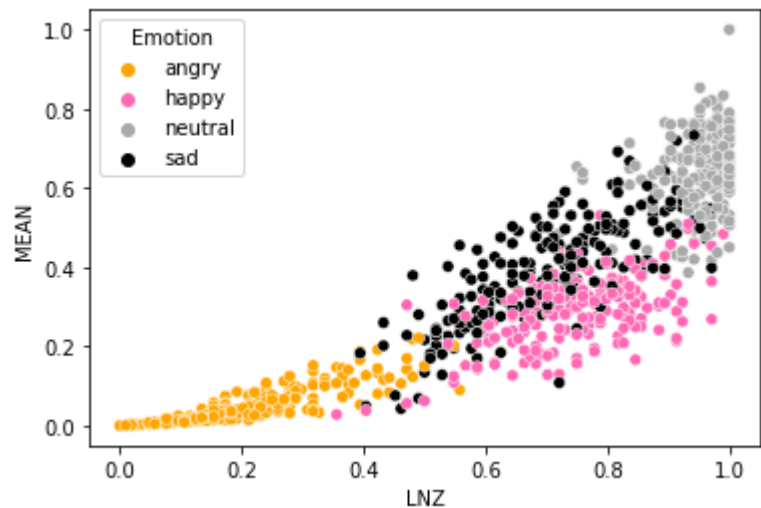
Correctly Classified Instances	644	80.5	%
Incorrectly Classified Instances	156	19.5	%
Kappa statistic	0.74		
Mean absolute error	0.1116		
Root mean squared error	0.2606		
Relative absolute error	29.75	%	
Root relative squared error	60.1861	%	
Total Number of Instances	800		

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,960	0,015	0,955	0,960	0,958	0,943	0,988	0,977	angry
	0,720	0,093	0,720	0,720	0,720	0,627	0,925	0,795	happy
	0,915	0,050	0,859	0,915	0,886	0,847	0,967	0,877	neutral
	0,625	0,102	0,672	0,625	0,648	0,536	0,860	0,666	sad
Weighted Avg.	0,805	0,065	0,802	0,805	0,803	0,738	0,935	0,829	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
192	3	0	5	a = angry
4	144	8	44	b = happy
0	5	183	12	c = neutral
5	48	22	125	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 9 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_old_green_150_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 9 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

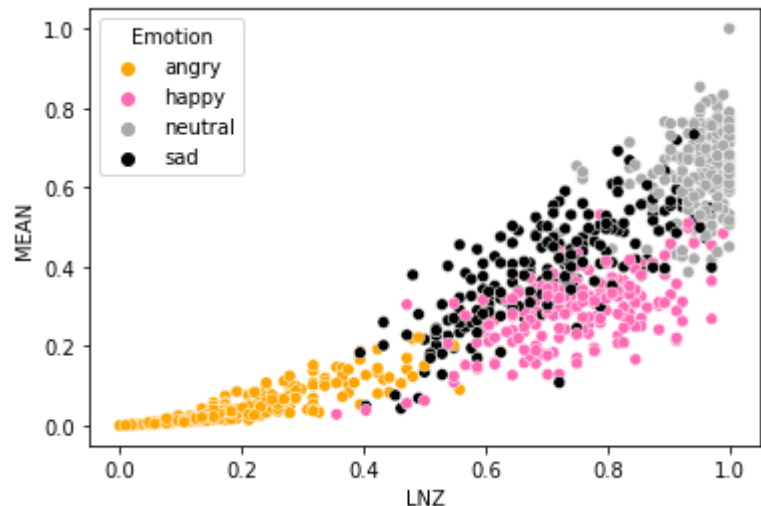
Correctly Classified Instances	652	81.5	%
Incorrectly Classified Instances	148	18.5	%
Kappa statistic	0.7533		
Mean absolute error	0.1139		
Root mean squared error	0.2526		
Relative absolute error	30.3763	%	
Root relative squared error	58.3409	%	
Total Number of Instances	800		

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,965	0,022	0,937	0,965	0,951	0,934	0,990	0,979	angry
	0,730	0,082	0,749	0,730	0,739	0,654	0,937	0,821	happy
	0,930	0,048	0,865	0,930	0,896	0,861	0,978	0,914	neutral
	0,635	0,095	0,690	0,635	0,661	0,556	0,879	0,695	sad
Weighted Avg.	0,815	0,062	0,810	0,815	0,812	0,751	0,946	0,852	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
193	3	0	4	a = angry
4	146	7	43	b = happy
0	4	186	10	c = neutral
9	42	22	127	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 1 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_old_green_50_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 1 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

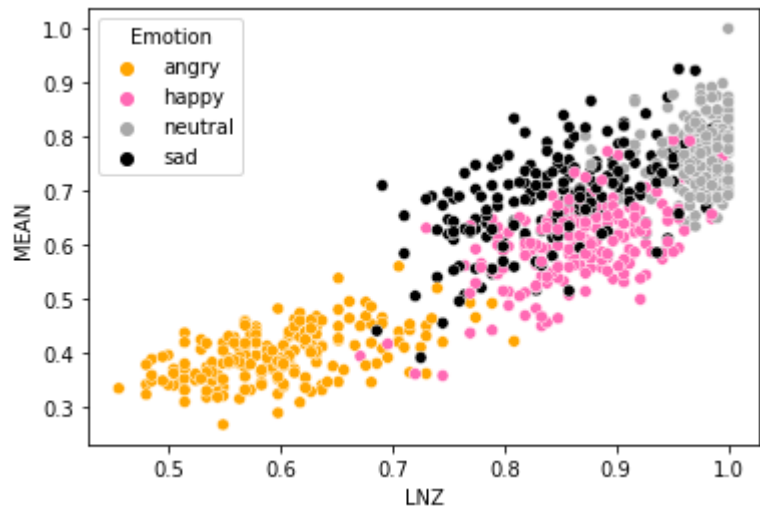
Correctly Classified Instances	586	73.25 %
Incorrectly Classified Instances	214	26.75 %
Kappa statistic	0.6433	
Mean absolute error	0.1351	
Root mean squared error	0.3647	
Relative absolute error	36.0211 %	
Root relative squared error	84.2272 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,950	0,020	0,941	0,950	0,945	0,927	0,965	0,906	angry
	0,620	0,115	0,642	0,620	0,631	0,511	0,753	0,495	happy
	0,795	0,073	0,783	0,795	0,789	0,718	0,861	0,675	neutral
	0,565	0,148	0,559	0,565	0,562	0,415	0,709	0,425	sad
Weighted Avg.	0,733	0,089	0,731	0,733	0,732	0,643	0,822	0,626	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
190	6	0	4	a = angry
5	124	15	56	b = happy
0	12	159	29	c = neutral
7	51	29	113	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 5 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_old_green_50_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 5 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

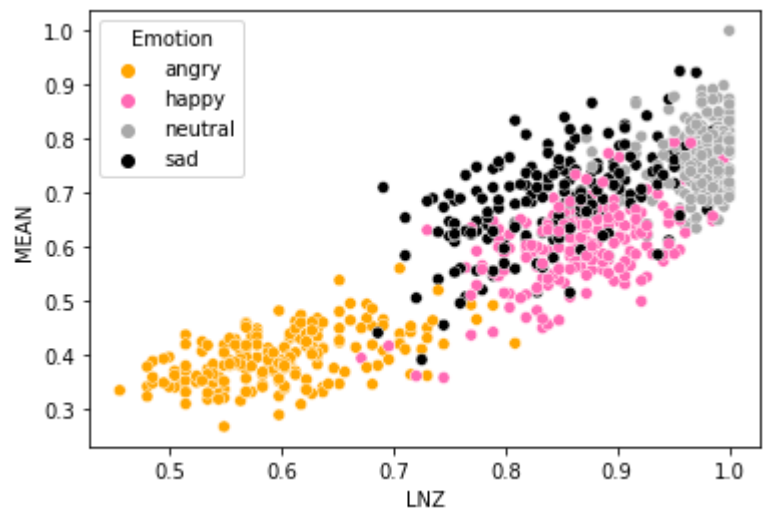
Correctly Classified Instances	625	78.125 %
Incorrectly Classified Instances	175	21.875 %
Kappa statistic	0.7083	
Mean absolute error	0.1306	
Root mean squared error	0.2808	
Relative absolute error	34.8334 %	
Root relative squared error	64.8438 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,980	0,022	0,938	0,980	0,958	0,945	0,991	0,973	angry
	0,710	0,112	0,679	0,710	0,694	0,590	0,892	0,696	happy
	0,900	0,062	0,829	0,900	0,863	0,816	0,958	0,855	neutral
	0,535	0,097	0,648	0,535	0,586	0,469	0,830	0,629	sad
Weighted Avg.	0,781	0,073	0,774	0,781	0,776	0,705	0,918	0,788	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
196	2	0	2	a = angry
7	142	9	42	b = happy
0	6	180	14	c = neutral
6	59	28	107	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 9 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_old_green_50_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 9 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

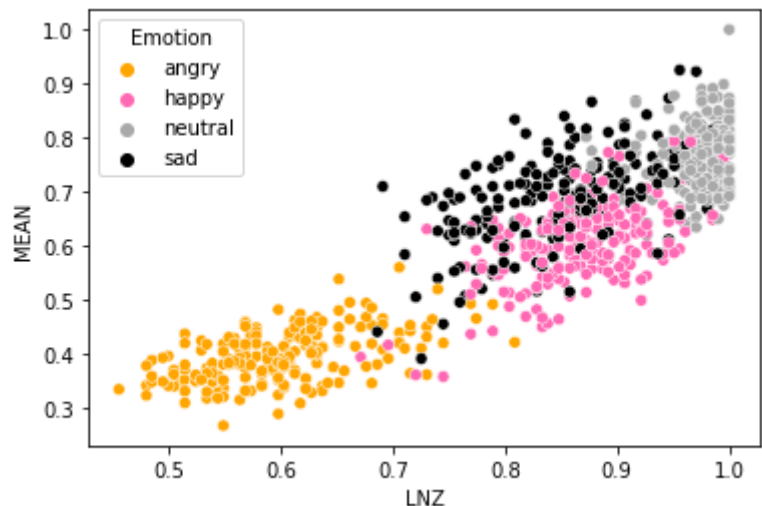
Correctly Classified Instances	640	80	%
Incorrectly Classified Instances	160	20	%
Kappa statistic	0.7333		
Mean absolute error	0.1288		
Root mean squared error	0.2669		
Relative absolute error	34.3535 %		
Root relative squared error	61.6398 %		
Total Number of Instances	800		

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,975	0,022	0,938	0,975	0,956	0,941	0,998	0,994	angry
	0,715	0,095	0,715	0,715	0,715	0,620	0,911	0,742	happy
	0,900	0,057	0,841	0,900	0,870	0,825	0,964	0,866	neutral
	0,610	0,093	0,685	0,610	0,646	0,538	0,860	0,698	sad
Weighted Avg.	0,800	0,067	0,795	0,800	0,796	0,731	0,933	0,825	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
195	3	0	2	a = angry
7	143	9	41	b = happy
0	7	180	13	c = neutral
6	47	25	122	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 1 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_old_red_100_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 1 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

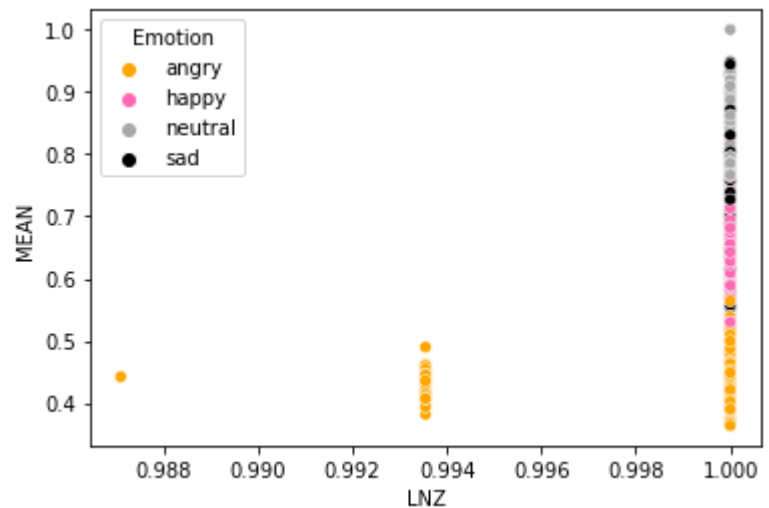
Correctly Classified Instances	458	57.25 %
Incorrectly Classified Instances	342	42.75 %
Kappa statistic	0.43	
Mean absolute error	0.2137	
Root mean squared error	0.4575	
Relative absolute error	56.9863 %	
Root relative squared error	105.6659 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,925	0,025	0,925	0,925	0,925	0,900	0,951	0,876	angry
	0,470	0,173	0,475	0,470	0,472	0,298	0,649	0,369	happy
	0,550	0,150	0,550	0,550	0,550	0,400	0,704	0,423	neutral
	0,345	0,222	0,342	0,345	0,343	0,123	0,567	0,284	sad
Weighted Avg.	0,573	0,143	0,573	0,573	0,573	0,430	0,718	0,488	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
185	12	0	3	a = angry
11	94	27	68	b = happy
0	28	110	62	c = neutral
4	64	63	69	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 5 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: **voice_old_red_100_up**-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 5 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

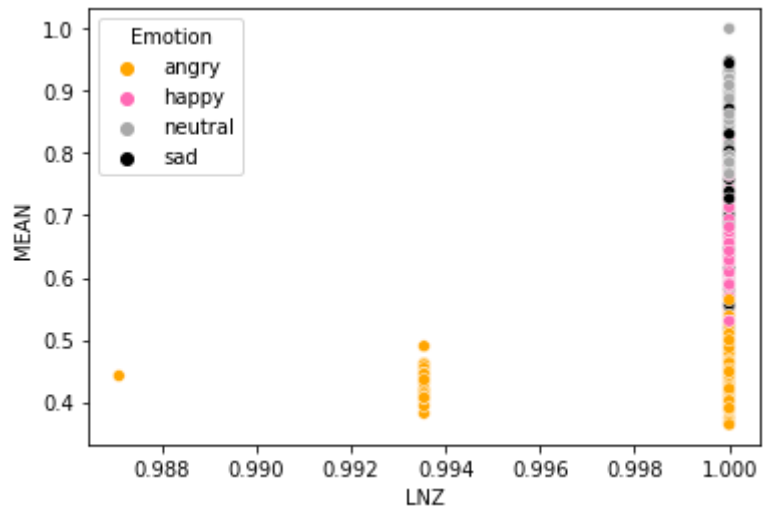
Correctly Classified Instances	491	61.375 %
Incorrectly Classified Instances	309	38.625 %
Kappa statistic	0.485	
Mean absolute error	0.2155	
Root mean squared error	0.3603	
Relative absolute error	57.4557 %	
Root relative squared error	83.1967 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,980	0,035	0,903	0,980	0,940	0,920	0,990	0,953	angry
	0,570	0,173	0,523	0,570	0,545	0,386	0,798	0,530	happy
	0,650	0,162	0,573	0,650	0,609	0,469	0,828	0,537	neutral
	0,255	0,145	0,370	0,255	0,302	0,126	0,650	0,329	sad
Weighted Avg.	0,614	0,129	0,592	0,614	0,599	0,475	0,817	0,587	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
196	4	0	0	a = angry
16	114	24	46	b = happy
0	29	130	41	c = neutral
5	71	73	51	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 9 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_old_red_100_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 9 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

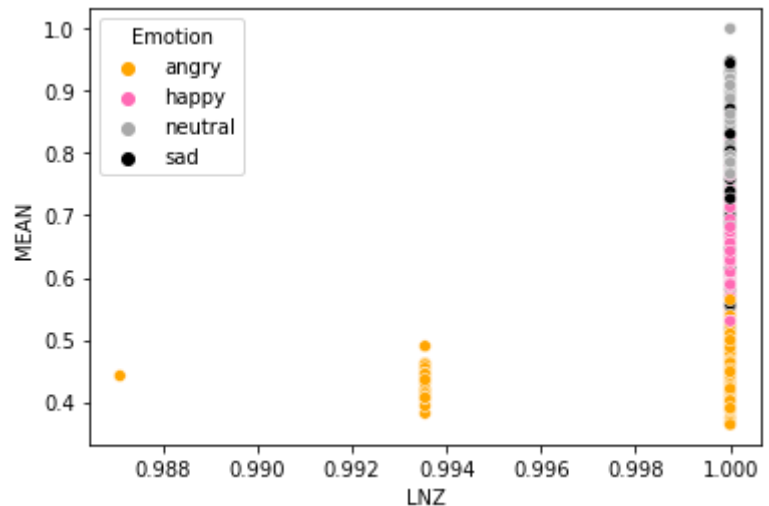
Correctly Classified Instances	512	64	%
Incorrectly Classified Instances	288	36	%
Kappa statistic	0.52		
Mean absolute error	0.2108		
Root mean squared error	0.3399		
Relative absolute error	56.2065 %		
Root relative squared error	78.4999 %		
Total Number of Instances	800		

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,975	0,037	0,899	0,975	0,935	0,914	0,991	0,965	angry
	0,620	0,160	0,564	0,620	0,590	0,446	0,838	0,582	happy
	0,705	0,158	0,597	0,705	0,647	0,519	0,853	0,588	neutral
	0,260	0,125	0,409	0,260	0,318	0,160	0,696	0,374	sad
Weighted Avg.	0,640	0,120	0,617	0,640	0,623	0,510	0,844	0,627	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
195	4	0	1	a = angry
16	124	22	38	b = happy
0	23	141	36	c = neutral
6	69	73	52	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 1 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_old_red_150_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 1 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

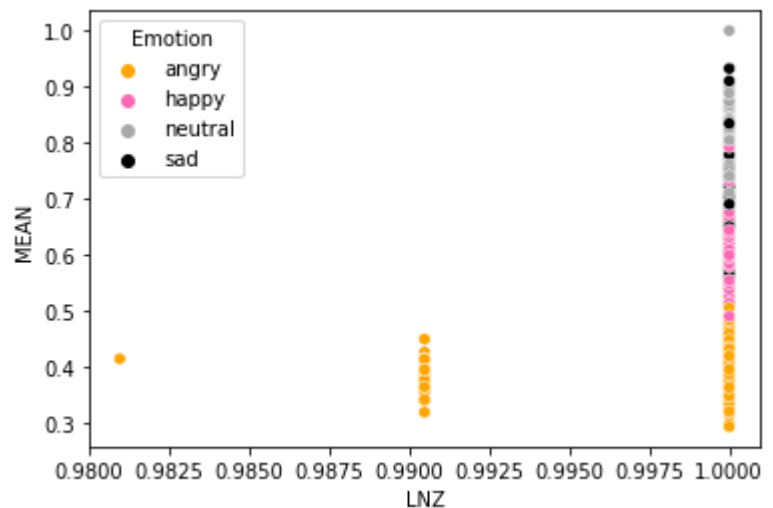
Correctly Classified Instances	471	58.875 %
Incorrectly Classified Instances	329	41.125 %
Kappa statistic	0.4517	
Mean absolute error	0.2065	
Root mean squared error	0.4472	
Relative absolute error	55.0756 %	
Root relative squared error	103.2702 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,920	0,030	0,911	0,920	0,915	0,887	0,948	0,863	angry
	0,555	0,163	0,531	0,555	0,543	0,386	0,699	0,417	happy
	0,515	0,153	0,528	0,515	0,522	0,365	0,691	0,406	neutral
	0,365	0,202	0,376	0,365	0,371	0,165	0,595	0,303	sad
Weighted Avg.	0,589	0,137	0,587	0,589	0,588	0,451	0,733	0,497	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
184	11	0	5	a = angry
14	111	27	48	b = happy
0	29	103	68	c = neutral
4	58	65	73	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 5 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_old_red_150_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LN2
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 5 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

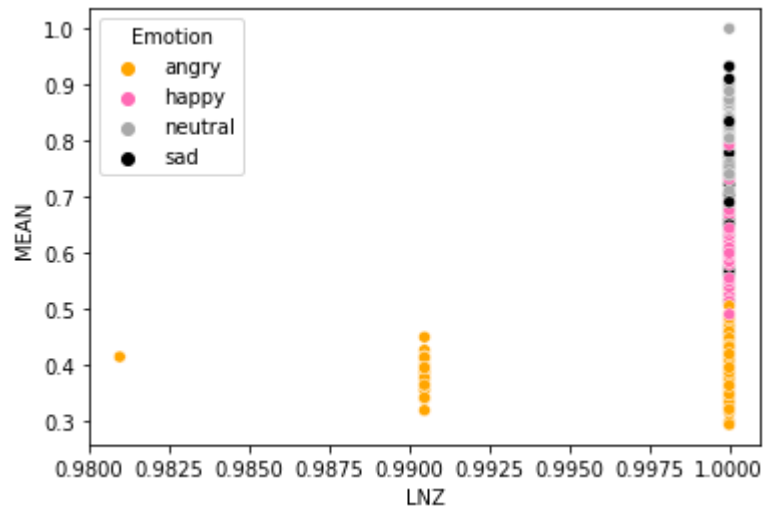
Correctly Classified Instances	518	64.75 %
Incorrectly Classified Instances	282	35.25 %
Kappa statistic	0.53	
Mean absolute error	0.2111	
Root mean squared error	0.3536	
Relative absolute error	56.2927 %	
Root relative squared error	81.6705 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,965	0,042	0,885	0,965	0,923	0,898	0,983	0,928	angry
	0,635	0,157	0,575	0,635	0,603	0,463	0,805	0,546	happy
	0,700	0,152	0,606	0,700	0,650	0,524	0,857	0,581	neutral
	0,290	0,120	0,446	0,290	0,352	0,200	0,675	0,362	sad
Weighted Avg.	0,648	0,118	0,628	0,648	0,632	0,521	0,830	0,604	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
193	7	0	0	a = angry
20	127	21	32	b = happy
0	20	140	40	c = neutral
5	67	70	58	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 9 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_old_red_150_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LN2
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 9 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

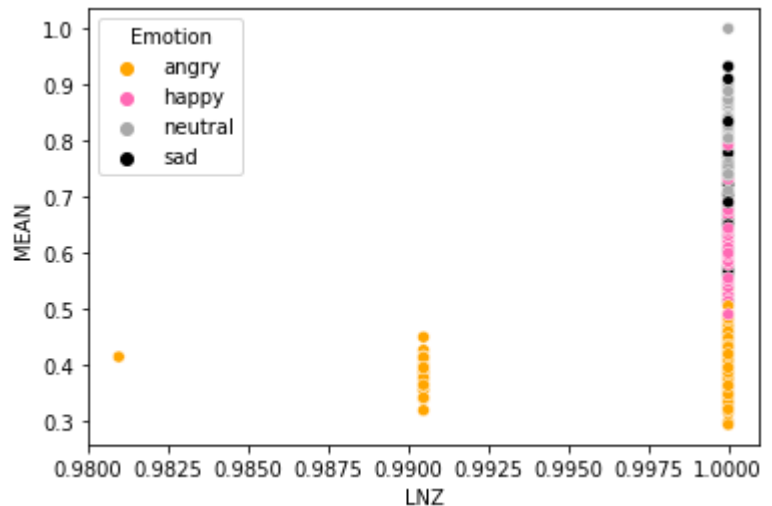
Correctly Classified Instances	524	65.5	%
Incorrectly Classified Instances	276	34.5	%
Kappa statistic	0.54		
Mean absolute error	0.2098		
Root mean squared error	0.3404		
Relative absolute error	55.9399	%	
Root relative squared error	78.6211	%	
Total Number of Instances	800		

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,970	0,035	0,902	0,970	0,935	0,913	0,986	0,948	angry
	0,660	0,140	0,611	0,660	0,635	0,507	0,834	0,589	happy
	0,720	0,165	0,593	0,720	0,650	0,523	0,872	0,596	neutral
	0,270	0,120	0,429	0,270	0,331	0,178	0,686	0,375	sad
Weighted Avg.	0,655	0,115	0,634	0,655	0,638	0,530	0,844	0,627	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
194	6	0	0	a = angry
17	132	20	31	b = happy
0	15	144	41	c = neutral
4	63	79	54	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 1 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
\"weka.core.EuclideanDistance -R first-last\""
Relation: voice_old_red_50_up-weka.filters.unsupervised.attribute.Remove-R1,3
Instances: 800
Attributes: 3
Emotion
MEAN
LNZ
Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
using 1 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

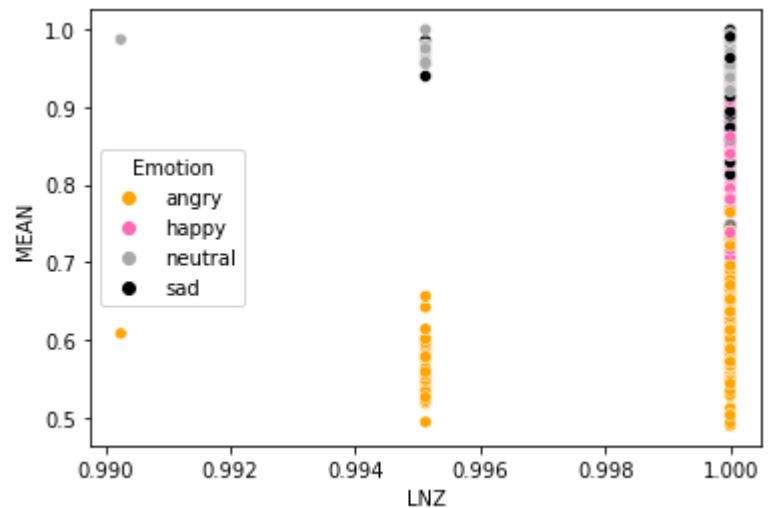
Correctly Classified Instances	415	51.875 %
Incorrectly Classified Instances	385	48.125 %
Kappa statistic	0.3583	
Mean absolute error	0.2398	
Root mean squared error	0.4795	
Relative absolute error	63.9475 %	
Root relative squared error	110.7259 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,915	0,020	0,938	0,915	0,927	0,903	0,951	0,882	angry
	0,440	0,222	0,398	0,440	0,418	0,211	0,607	0,328	happy
	0,420	0,195	0,418	0,420	0,419	0,225	0,605	0,319	neutral
	0,300	0,205	0,328	0,300	0,313	0,098	0,553	0,277	sad
Weighted Avg.	0,519	0,160	0,521	0,519	0,519	0,359	0,679	0,451	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
183	12	0	5	a = angry
8	88	47	57	b = happy
0	55	84	61	c = neutral
4	66	70	60	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 5 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_old_red_50_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 5 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

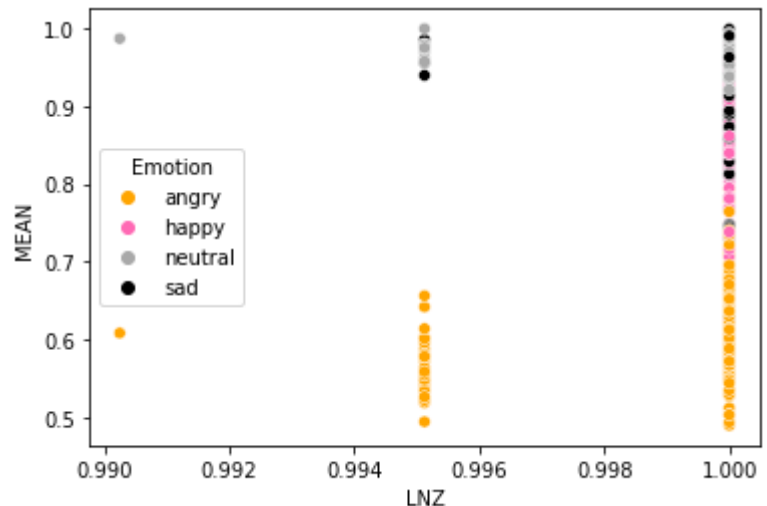
Correctly Classified Instances	454	56.75	%
Incorrectly Classified Instances	346	43.25	%
Kappa statistic	0.4233		
Mean absolute error	0.2353		
Root mean squared error	0.3741		
Relative absolute error	62.7555	%	
Root relative squared error	86.3939	%	
Total Number of Instances	800		

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,975	0,030	0,915	0,975	0,944	0,926	0,986	0,949	angry
	0,460	0,225	0,405	0,460	0,431	0,226	0,717	0,411	happy
	0,585	0,190	0,506	0,585	0,543	0,377	0,787	0,442	neutral
	0,250	0,132	0,388	0,250	0,304	0,139	0,652	0,334	sad
Weighted Avg.	0,568	0,144	0,554	0,568	0,556	0,417	0,785	0,534	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
195	5	0	0	a = angry
12	92	48	48	b = happy
0	52	117	31	c = neutral
6	78	66	50	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 9 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_old_red_50_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 9 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

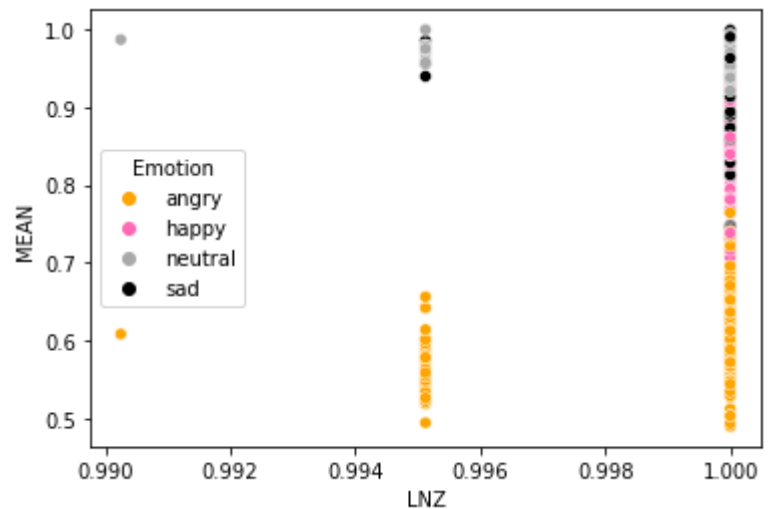
Correctly Classified Instances	467	58.375 %
Incorrectly Classified Instances	333	41.625 %
Kappa statistic	0.445	
Mean absolute error	0.2389	
Root mean squared error	0.3633	
Relative absolute error	63.7033 %	
Root relative squared error	83.8993 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,975	0,028	0,920	0,975	0,947	0,929	0,993	0,967	angry
	0,475	0,193	0,450	0,475	0,462	0,277	0,733	0,406	happy
	0,690	0,203	0,531	0,690	0,600	0,450	0,807	0,460	neutral
	0,195	0,130	0,333	0,195	0,246	0,080	0,661	0,332	sad
Weighted Avg.	0,584	0,139	0,559	0,584	0,564	0,434	0,799	0,541	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
195	4	0	1	a = angry
10	95	48	47	b = happy
0	32	138	30	c = neutral
7	80	74	39	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 1 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_young_blue_100_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 1 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

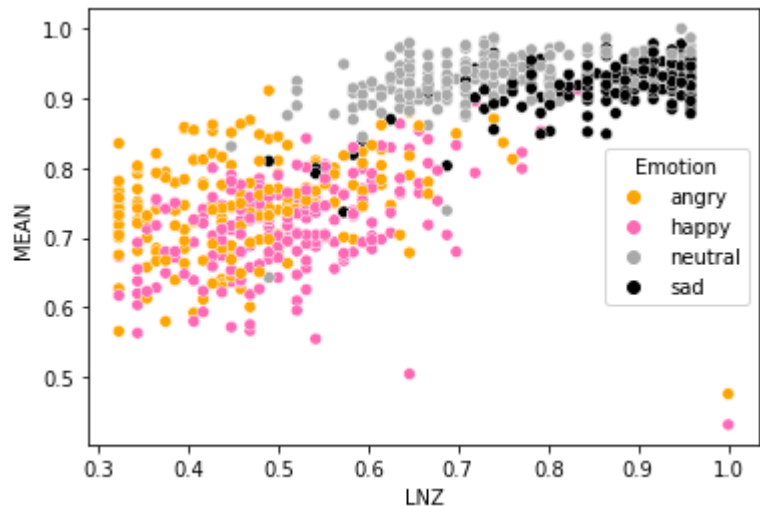
Correctly Classified Instances	493	61.625 %
Incorrectly Classified Instances	307	38.375 %
Kappa statistic	0.4883	
Mean absolute error	0.1932	
Root mean squared error	0.437	
Relative absolute error	51.5192 %	
Root relative squared error	100.9229 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,550	0,143	0,561	0,550	0,556	0,409	0,704	0,421	angry
	0,560	0,153	0,549	0,560	0,554	0,404	0,704	0,418	happy
	0,710	0,100	0,703	0,710	0,706	0,608	0,805	0,571	neutral
	0,645	0,115	0,652	0,645	0,648	0,532	0,765	0,509	sad
Weighted Avg.	0,616	0,128	0,616	0,616	0,616	0,488	0,744	0,480	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
110	80	2	8	a = angry
77	112	1	10	b = happy
5	2	142	51	c = neutral
4	10	57	129	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 5 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_young_blue_100_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LN2
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 5 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

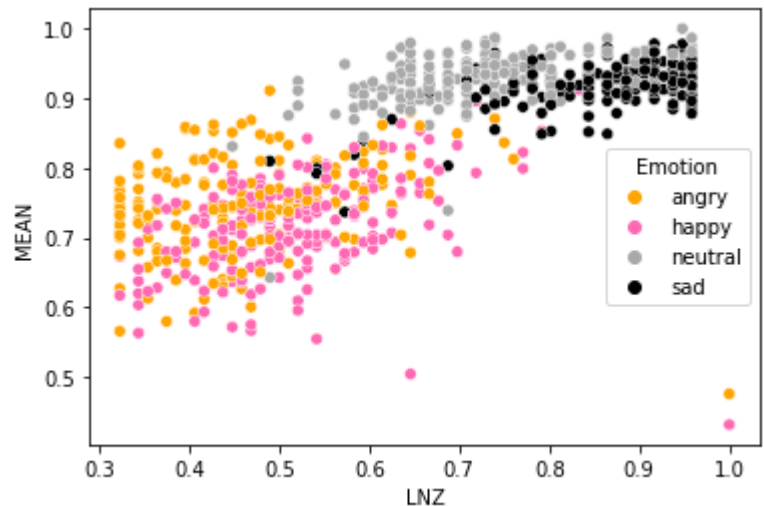
Correctly Classified Instances	511	63.875 %
Incorrectly Classified Instances	289	36.125 %
Kappa statistic	0.5183	
Mean absolute error	0.1949	
Root mean squared error	0.3401	
Relative absolute error	51.97 %	
Root relative squared error	78.5504 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,530	0,158	0,527	0,530	0,529	0,371	0,842	0,607	angry
	0,540	0,165	0,522	0,540	0,531	0,371	0,839	0,530	happy
	0,715	0,067	0,781	0,715	0,747	0,668	0,909	0,793	neutral
	0,770	0,092	0,737	0,770	0,753	0,669	0,912	0,721	sad
Weighted Avg.	0,639	0,120	0,642	0,639	0,640	0,520	0,875	0,662	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
106	91	2	1	a = angry
88	108	1	3	b = happy
3	3	143	51	c = neutral
4	5	37	154	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 9 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_young_blue_100_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 9 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

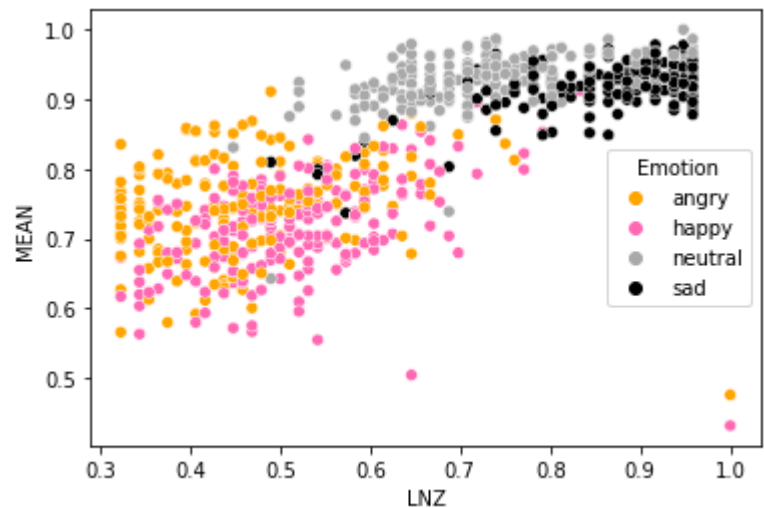
Correctly Classified Instances	517	64.625 %
Incorrectly Classified Instances	283	35.375 %
Kappa statistic	0.5283	
Mean absolute error	0.1962	
Root mean squared error	0.327	
Relative absolute error	52.3146 %	
Root relative squared error	75.5097 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,550	0,160	0,534	0,550	0,542	0,386	0,866	0,644	angry
	0,540	0,157	0,535	0,540	0,537	0,382	0,858	0,577	happy
	0,705	0,063	0,788	0,705	0,744	0,667	0,926	0,822	neutral
	0,790	0,092	0,742	0,790	0,765	0,684	0,921	0,749	sad
Weighted Avg.	0,646	0,118	0,650	0,646	0,647	0,530	0,892	0,698	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
110	87	3	0	a = angry
88	108	1	3	b = happy
4	3	141	52	c = neutral
4	4	34	158	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 1 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_young_blue_150_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LN2
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 1 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

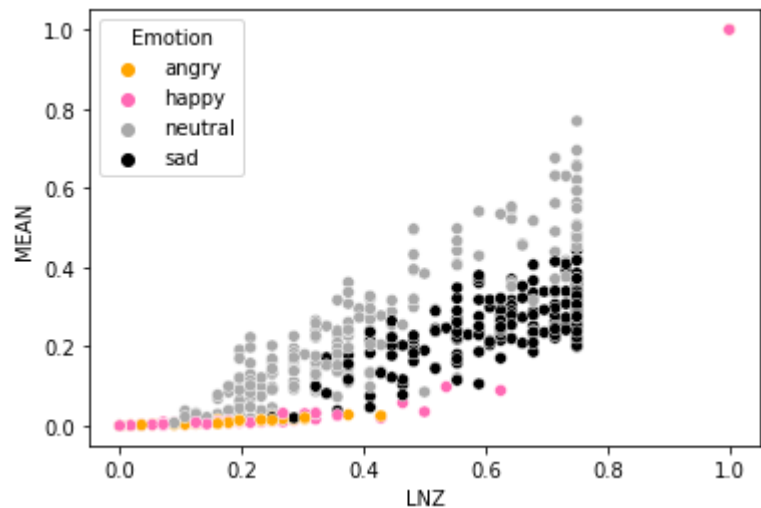
Correctly Classified Instances	543	67.875 %
Incorrectly Classified Instances	257	32.125 %
Kappa statistic	0.5717	
Mean absolute error	0.173	
Root mean squared error	0.365	
Relative absolute error	46.1229 %	
Root relative squared error	84.3042 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,730	0,198	0,551	0,730	0,628	0,489	0,779	0,474	angry
	0,405	0,102	0,570	0,405	0,474	0,344	0,762	0,473	happy
	0,755	0,062	0,803	0,755	0,778	0,708	0,822	0,680	neutral
	0,825	0,067	0,805	0,825	0,815	0,752	0,923	0,738	sad
Weighted Avg.	0,679	0,107	0,682	0,679	0,674	0,573	0,822	0,591	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
146	47	3	4	a = angry
107	81	6	6	b = happy
8	11	151	30	c = neutral
4	3	28	165	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 5 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_young_blue_150_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LN2
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 5 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

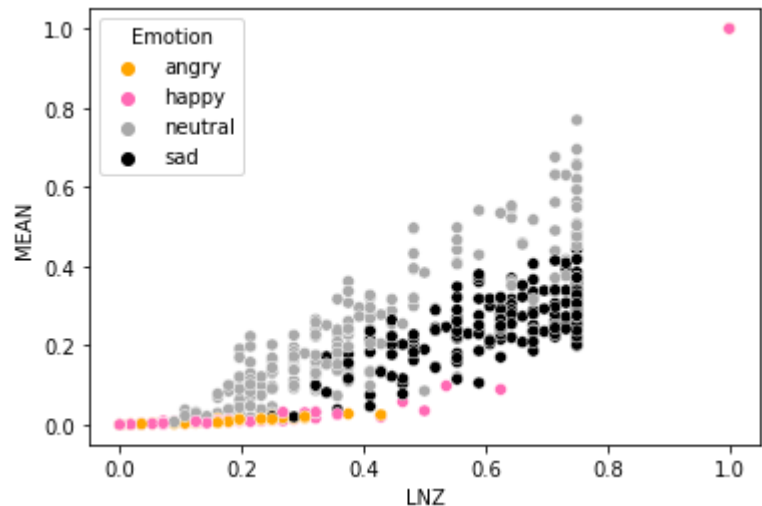
Correctly Classified Instances	563	70.375 %
Incorrectly Classified Instances	237	29.625 %
Kappa statistic	0.605	
Mean absolute error	0.1775	
Root mean squared error	0.316	
Relative absolute error	47.336 %	
Root relative squared error	72.9819 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,690	0,190	0,548	0,690	0,611	0,466	0,839	0,550	angry
	0,500	0,125	0,571	0,500	0,533	0,393	0,839	0,541	happy
	0,785	0,040	0,867	0,785	0,824	0,771	0,902	0,837	neutral
	0,840	0,040	0,875	0,840	0,857	0,811	0,968	0,908	sad
Weighted Avg.	0,704	0,099	0,715	0,704	0,706	0,610	0,887	0,709	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
138	59	2	1	a = angry
97	100	1	2	b = happy
9	13	157	21	c = neutral
8	3	21	168	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 9 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_young_blue_150_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 9 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

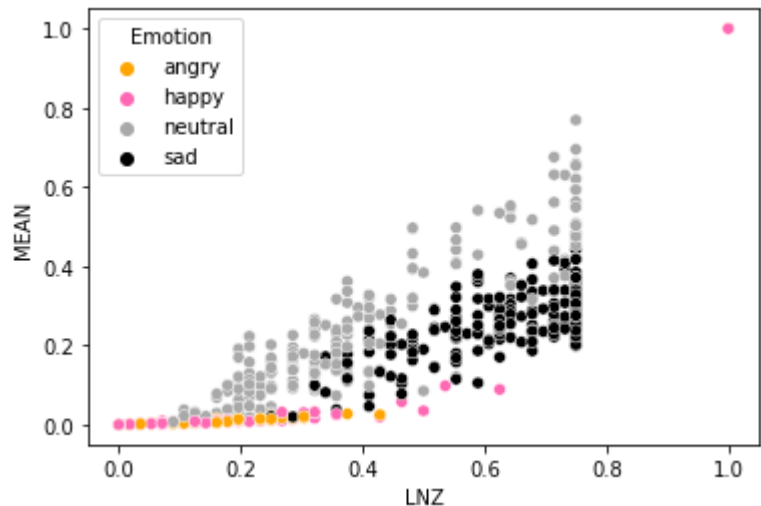
Correctly Classified Instances	569	71.125 %
Incorrectly Classified Instances	231	28.875 %
Kappa statistic	0.615	
Mean absolute error	0.1802	
Root mean squared error	0.3109	
Relative absolute error	48.051 %	
Root relative squared error	71.8078 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,670	0,158	0,585	0,670	0,625	0,490	0,855	0,550	angry
	0,555	0,150	0,552	0,555	0,554	0,404	0,837	0,553	happy
	0,765	0,035	0,879	0,765	0,818	0,766	0,913	0,851	neutral
	0,855	0,042	0,872	0,855	0,864	0,819	0,972	0,918	sad
Weighted Avg.	0,711	0,096	0,722	0,711	0,715	0,620	0,894	0,718	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
134	65	1	0	a = angry
85	111	1	3	b = happy
4	21	153	22	c = neutral
6	4	19	171	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 1 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_young_blue_50_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 1 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

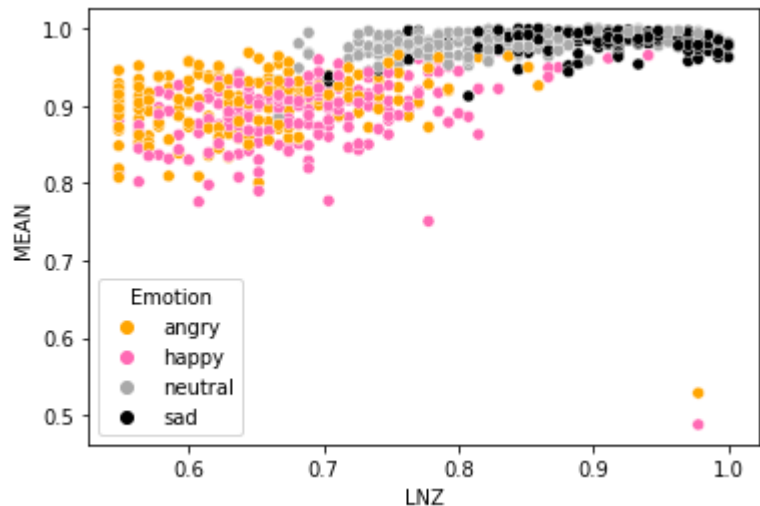
Correctly Classified Instances	464	58	%
Incorrectly Classified Instances	336	42	%
Kappa statistic	0.44		
Mean absolute error	0.2106		
Root mean squared error	0.4563		
Relative absolute error	56.1595 %		
Root relative squared error	105.3822 %		
Total Number of Instances	800		

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,555	0,167	0,526	0,555	0,540	0,382	0,696	0,406	angry
	0,485	0,155	0,511	0,485	0,497	0,336	0,668	0,378	happy
	0,655	0,128	0,630	0,655	0,642	0,520	0,764	0,499	neutral
	0,625	0,110	0,654	0,625	0,639	0,523	0,756	0,506	sad
Weighted Avg.	0,580	0,140	0,580	0,580	0,580	0,440	0,721	0,447	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
111	82	6	1	a = angry
92	97	6	5	b = happy
3	6	131	60	c = neutral
5	5	65	125	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 5 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_young_blue_50_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 5 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

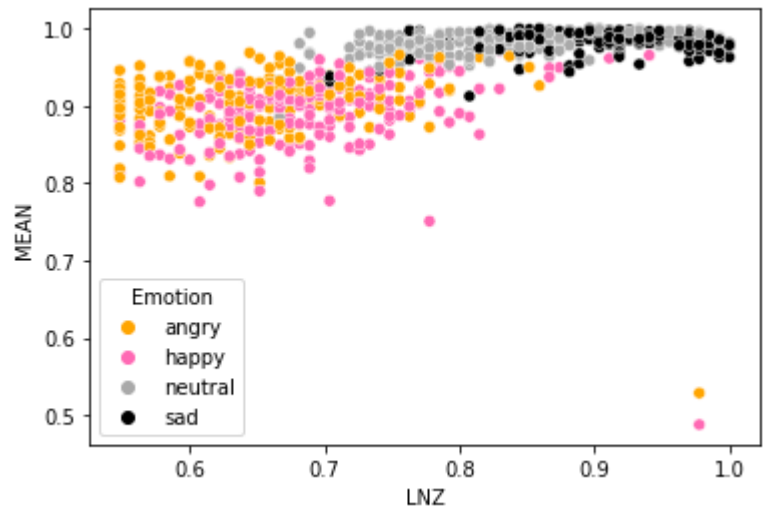
Correctly Classified Instances	497	62.125 %
Incorrectly Classified Instances	303	37.875 %
Kappa statistic	0.495	
Mean absolute error	0.2091	
Root mean squared error	0.3527	
Relative absolute error	55.7491 %	
Root relative squared error	81.4449 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,540	0,155	0,537	0,540	0,539	0,384	0,825	0,599	angry
	0,550	0,163	0,529	0,550	0,539	0,382	0,841	0,533	happy
	0,665	0,092	0,707	0,665	0,686	0,586	0,875	0,703	neutral
	0,730	0,095	0,719	0,730	0,725	0,632	0,900	0,677	sad
Weighted Avg.	0,621	0,126	0,623	0,621	0,622	0,496	0,860	0,628	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
108	86	6	0	a = angry
83	110	5	2	b = happy
5	7	133	55	c = neutral
5	5	44	146	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 9 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_young_blue_50_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 9 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

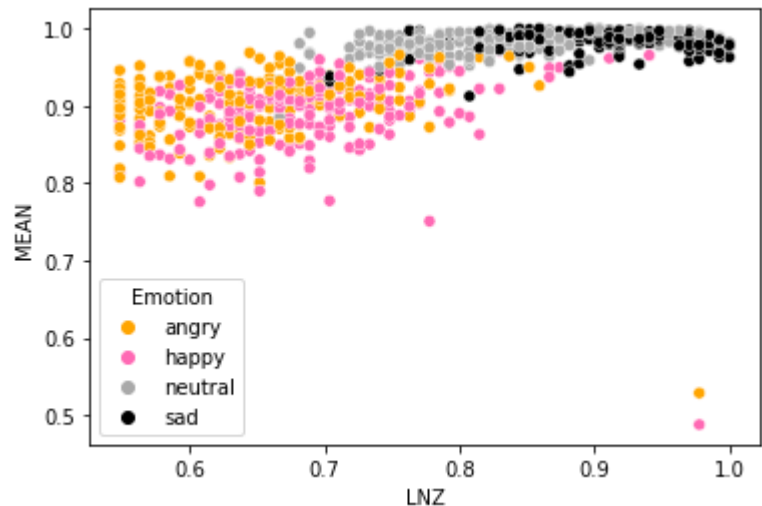
Correctly Classified Instances	506	63.25 %
Incorrectly Classified Instances	294	36.75 %
Kappa statistic	0.51	
Mean absolute error	0.2099	
Root mean squared error	0.3407	
Relative absolute error	55.9753 %	
Root relative squared error	78.6878 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,565	0,155	0,549	0,565	0,557	0,406	0,862	0,652	angry
	0,535	0,147	0,549	0,535	0,542	0,392	0,852	0,573	happy
	0,650	0,082	0,726	0,650	0,686	0,591	0,898	0,741	neutral
	0,780	0,107	0,709	0,780	0,743	0,653	0,907	0,701	sad
Weighted Avg.	0,633	0,123	0,633	0,633	0,632	0,510	0,880	0,667	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
113	79	8	0	a = angry
82	107	6	5	b = happy
8	3	130	59	c = neutral
3	6	35	156	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 1 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_young_green_100_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 1 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

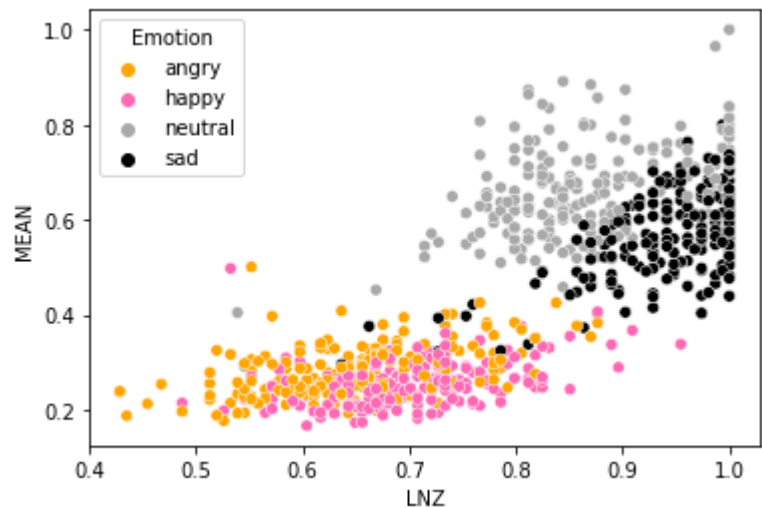
Correctly Classified Instances	526	65.75	%
Incorrectly Classified Instances	274	34.25	%
Kappa statistic	0.5433		
Mean absolute error	0.1727		
Root mean squared error	0.4129		
Relative absolute error	46.0496	%	
Root relative squared error	95.3494	%	
Total Number of Instances	800		

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,465	0,165	0,484	0,465	0,474	0,304	0,650	0,359	angry
	0,535	0,172	0,510	0,535	0,522	0,358	0,682	0,389	happy
	0,830	0,050	0,847	0,830	0,838	0,785	0,890	0,745	neutral
	0,800	0,070	0,792	0,800	0,796	0,728	0,865	0,684	sad
Weighted Avg.	0,658	0,114	0,658	0,658	0,658	0,544	0,772	0,544	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
93	99	1	7	a = angry
89	107	0	4	b = happy
3	0	166	31	c = neutral
7	4	29	160	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 5 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
\"weka.core.EuclideanDistance -R first-last\""
Relation: voice_young_green_100_up-weka.filters.unsupervised.attribute.Remove-R1,3
Instances: 800
Attributes: 3
Emotion
MEAN
LNZ
Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
using 5 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

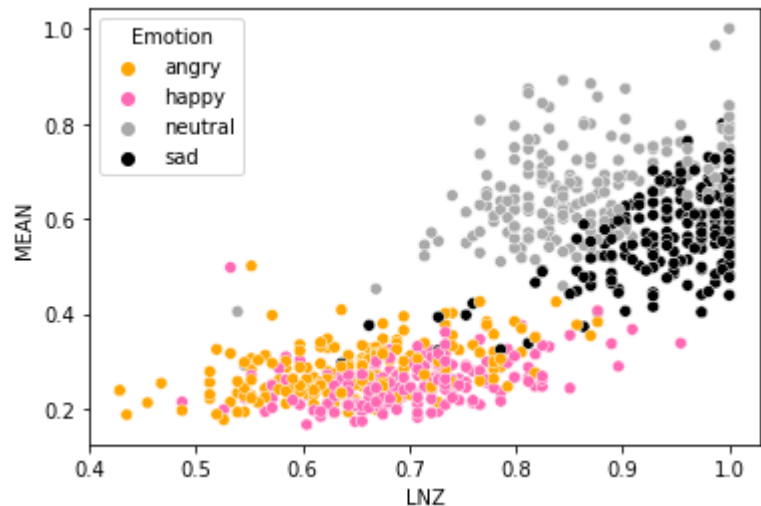
Correctly Classified Instances	593	74.125 %
Incorrectly Classified Instances	207	25.875 %
Kappa statistic	0.655	
Mean absolute error	0.1548	
Root mean squared error	0.3055	
Relative absolute error	41.293 %	
Root relative squared error	70.5434 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,645	0,133	0,617	0,645	0,631	0,504	0,854	0,580	angry
	0,640	0,120	0,640	0,640	0,640	0,520	0,860	0,600	happy
	0,850	0,040	0,876	0,850	0,863	0,818	0,958	0,902	neutral
	0,830	0,052	0,843	0,830	0,836	0,782	0,951	0,866	sad
Weighted Avg.	0,741	0,086	0,744	0,741	0,743	0,656	0,906	0,737	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
129	69	0	2	a = angry
70	128	0	2	b = happy
3	0	170	27	c = neutral
7	3	24	166	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 9 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_young_green_100_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 9 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

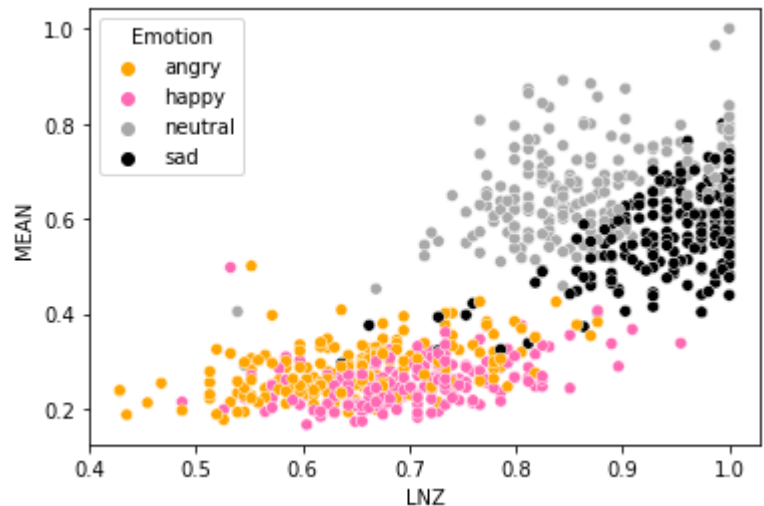
Correctly Classified Instances	591	73.875 %
Incorrectly Classified Instances	209	26.125 %
Kappa statistic	0.6517	
Mean absolute error	0.1564	
Root mean squared error	0.2924	
Relative absolute error	41.7082 %	
Root relative squared error	67.5354 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,645	0,128	0,626	0,645	0,635	0,512	0,886	0,643	angry
	0,650	0,122	0,640	0,650	0,645	0,526	0,891	0,640	happy
	0,840	0,045	0,862	0,840	0,851	0,802	0,970	0,928	neutral
	0,820	0,053	0,837	0,820	0,828	0,772	0,960	0,891	sad
Weighted Avg.	0,739	0,087	0,741	0,739	0,740	0,653	0,927	0,776	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
129	70	0	1	a = angry
68	130	0	2	b = happy
3	0	168	29	c = neutral
6	3	27	164	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 1 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
\"weka.core.EuclideanDistance -R first-last\""
Relation: voice_young_green_150_up-weka.filters.unsupervised.attribute.Remove-R1,3
Instances: 800
Attributes: 3
Emotion
MEAN
LNZ
Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
using 1 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

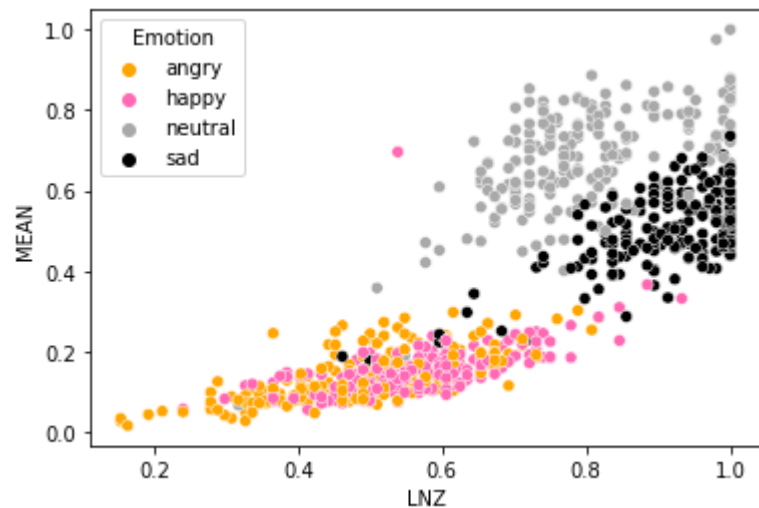
Correctly Classified Instances	569	71.125 %
Incorrectly Classified Instances	231	28.875 %
Kappa statistic	0.615	
Mean absolute error	0.1453	
Root mean squared error	0.3783	
Relative absolute error	38.7562 %	
Root relative squared error	87.3673 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,550	0,155	0,542	0,550	0,546	0,393	0,697	0,412	angry
	0,535	0,153	0,538	0,535	0,536	0,382	0,693	0,406	happy
	0,885	0,030	0,908	0,885	0,896	0,862	0,928	0,832	neutral
	0,875	0,047	0,862	0,875	0,868	0,824	0,915	0,787	sad
Weighted Avg.	0,711	0,096	0,712	0,711	0,712	0,615	0,808	0,609	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
110	86	1	3	a = angry
87	107	1	5	b = happy
2	1	177	20	c = neutral
4	5	16	175	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 5 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_young_green_150_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 5 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

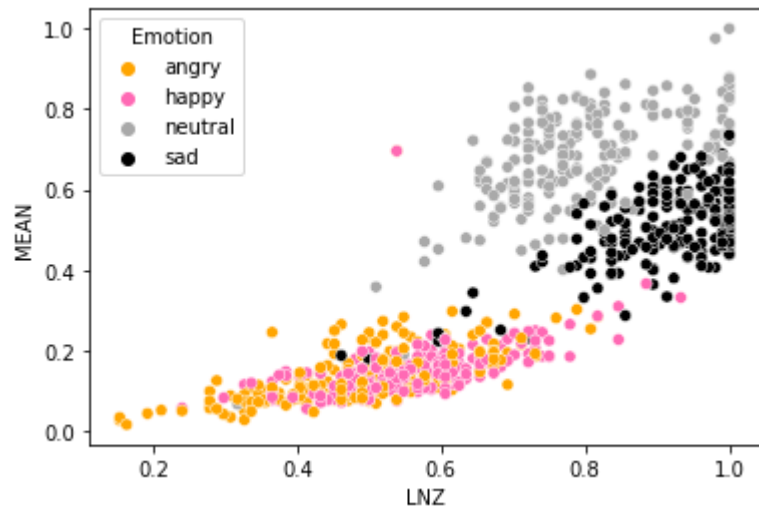
Correctly Classified Instances	590	73.75 %
Incorrectly Classified Instances	210	26.25 %
Kappa statistic	0.65	
Mean absolute error	0.1461	
Root mean squared error	0.2945	
Relative absolute error	38.9566 %	
Root relative squared error	68.0066 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,575	0,147	0,567	0,575	0,571	0,426	0,843	0,574	angry
	0,575	0,148	0,564	0,575	0,569	0,424	0,849	0,543	happy
	0,905	0,022	0,933	0,905	0,919	0,892	0,979	0,957	neutral
	0,895	0,033	0,899	0,895	0,897	0,863	0,971	0,927	sad
Weighted Avg.	0,738	0,088	0,741	0,738	0,739	0,651	0,911	0,750	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
115	83	1	1	a = angry
81	115	1	3	b = happy
3	0	181	16	c = neutral
4	6	11	179	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 9 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_young_green_150_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 9 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

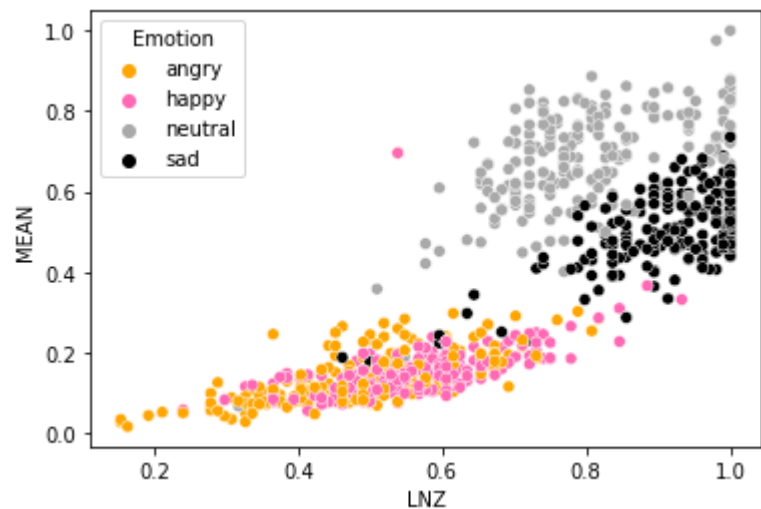
Correctly Classified Instances	604	75.5	%
Incorrectly Classified Instances	196	24.5	%
Kappa statistic	0.6733		
Mean absolute error	0.1436		
Root mean squared error	0.281		
Relative absolute error	38.2844	%	
Root relative squared error	64.9054	%	
Total Number of Instances	800		

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,575	0,135	0,587	0,575	0,581	0,443	0,868	0,611	angry
	0,615	0,147	0,583	0,615	0,599	0,460	0,868	0,584	happy
	0,920	0,018	0,944	0,920	0,932	0,909	0,980	0,965	neutral
	0,910	0,027	0,919	0,910	0,915	0,886	0,978	0,937	sad
Weighted Avg.	0,755	0,082	0,758	0,755	0,756	0,675	0,923	0,774	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
115	84	1	0	a = angry
73	123	1	3	b = happy
3	0	184	13	c = neutral
5	4	9	182	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 1 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_young_green_50_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 1 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

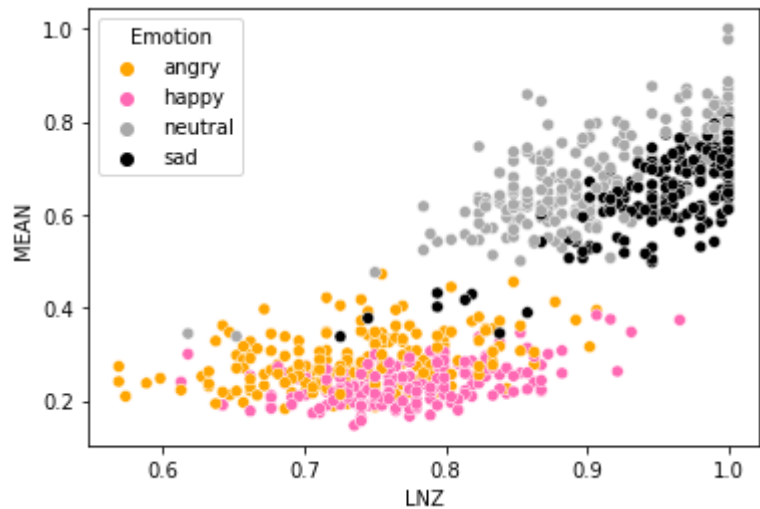
Correctly Classified Instances	591	73.875 %
Incorrectly Classified Instances	209	26.125 %
Kappa statistic	0.6517	
Mean absolute error	0.132	
Root mean squared error	0.3604	
Relative absolute error	35.1934 %	
Root relative squared error	83.2375 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,615	0,110	0,651	0,615	0,632	0,515	0,753	0,496	angry
	0,705	0,113	0,675	0,705	0,689	0,583	0,796	0,549	happy
	0,800	0,053	0,833	0,800	0,816	0,757	0,873	0,717	neutral
	0,835	0,072	0,795	0,835	0,815	0,751	0,882	0,705	sad
Weighted Avg.	0,739	0,087	0,739	0,739	0,738	0,652	0,826	0,617	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
123	68	3	6	a = angry
58	141	1	0	b = happy
3	0	160	37	c = neutral
5	0	28	167	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 5 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_young_green_50_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 5 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

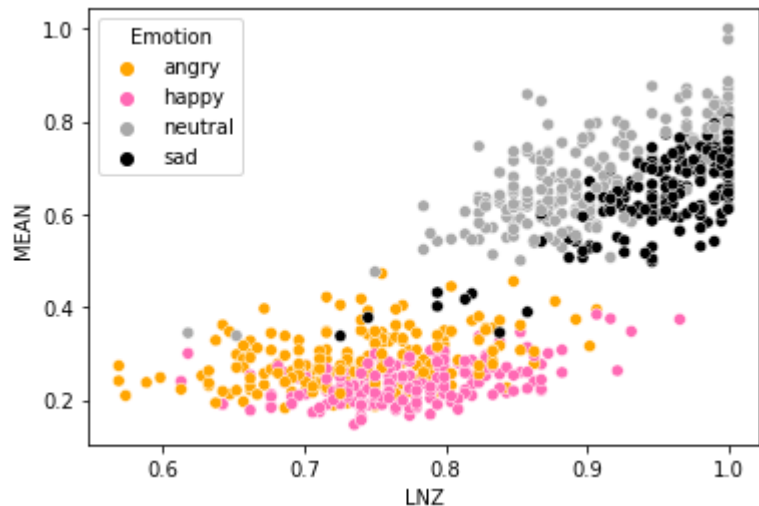
Correctly Classified Instances	629	78.625 %
Incorrectly Classified Instances	171	21.375 %
Kappa statistic	0.715	
Mean absolute error	0.1364	
Root mean squared error	0.2845	
Relative absolute error	36.3818 %	
Root relative squared error	65.696 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,710	0,102	0,700	0,710	0,705	0,605	0,892	0,686	angry
	0,735	0,093	0,724	0,735	0,730	0,639	0,911	0,717	happy
	0,830	0,037	0,883	0,830	0,856	0,810	0,951	0,871	neutral
	0,870	0,053	0,845	0,870	0,857	0,809	0,949	0,857	sad
Weighted Avg.	0,786	0,071	0,788	0,786	0,787	0,716	0,926	0,783	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
142	56	1	1	a = angry
53	147	0	0	b = happy
3	0	166	31	c = neutral
5	0	21	174	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 9 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_young_green_50_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 9 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

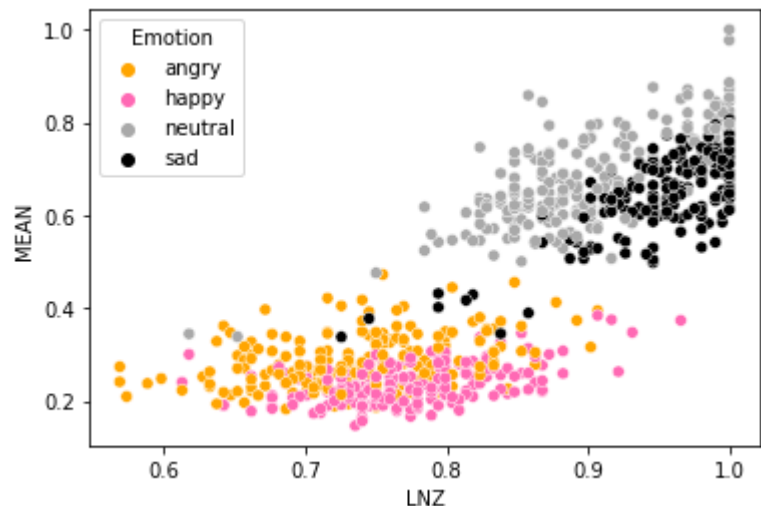
Correctly Classified Instances	641	80.125 %
Incorrectly Classified Instances	159	19.875 %
Kappa statistic	0.735	
Mean absolute error	0.1376	
Root mean squared error	0.2749	
Relative absolute error	36.7057 %	
Root relative squared error	63.4856 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,745	0,098	0,716	0,745	0,730	0,638	0,914	0,712	angry
	0,760	0,083	0,752	0,760	0,756	0,674	0,932	0,767	happy
	0,850	0,037	0,885	0,850	0,867	0,825	0,962	0,894	neutral
	0,850	0,047	0,859	0,850	0,854	0,806	0,956	0,879	sad
Weighted Avg.	0,801	0,066	0,803	0,801	0,802	0,736	0,941	0,813	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
149	50	0	1	a = angry
48	152	0	0	b = happy
3	0	170	27	c = neutral
8	0	22	170	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 1 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_young_red_100_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LN2
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 1 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

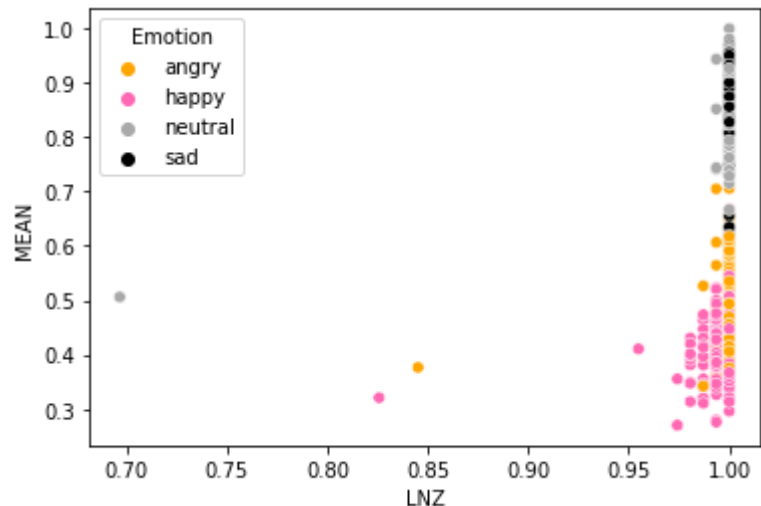
Correctly Classified Instances	466	58.25 %
Incorrectly Classified Instances	334	41.75 %
Kappa statistic	0.4433	
Mean absolute error	0.2103	
Root mean squared error	0.4543	
Relative absolute error	56.073 %	
Root relative squared error	104.913 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,650	0,118	0,647	0,650	0,648	0,531	0,766	0,509	angry
	0,660	0,113	0,660	0,660	0,660	0,547	0,780	0,525	happy
	0,580	0,182	0,516	0,580	0,546	0,384	0,703	0,409	neutral
	0,440	0,143	0,506	0,440	0,471	0,311	0,659	0,373	sad
Weighted Avg.	0,583	0,139	0,582	0,583	0,581	0,443	0,727	0,454	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
130	64	2	4	a = angry
65	132	1	2	b = happy
2	2	116	80	c = neutral
4	2	106	88	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 5 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_young_red_100_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LN2
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 5 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

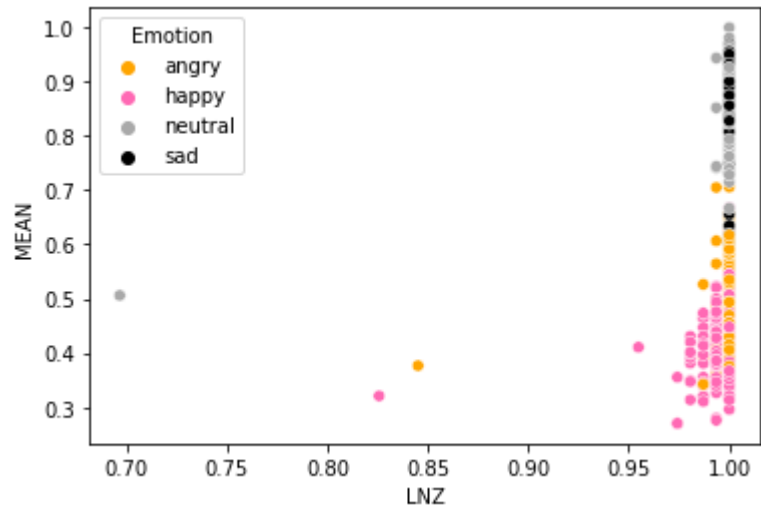
Correctly Classified Instances	511	63.875 %
Incorrectly Classified Instances	289	36.125 %
Kappa statistic	0.5183	
Mean absolute error	0.2067	
Root mean squared error	0.3522	
Relative absolute error	55.132 %	
Root relative squared error	81.3382 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,715	0,113	0,678	0,715	0,696	0,591	0,895	0,684	angry
	0,705	0,095	0,712	0,705	0,709	0,612	0,904	0,706	happy
	0,620	0,152	0,577	0,620	0,598	0,457	0,846	0,556	neutral
	0,515	0,122	0,585	0,515	0,548	0,411	0,832	0,535	sad
Weighted Avg.	0,639	0,120	0,638	0,639	0,637	0,518	0,869	0,620	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
143	55	2	0	a = angry
59	141	0	0	b = happy
2	1	124	73	c = neutral
7	1	89	103	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 9 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_young_red_100_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LN2
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 9 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

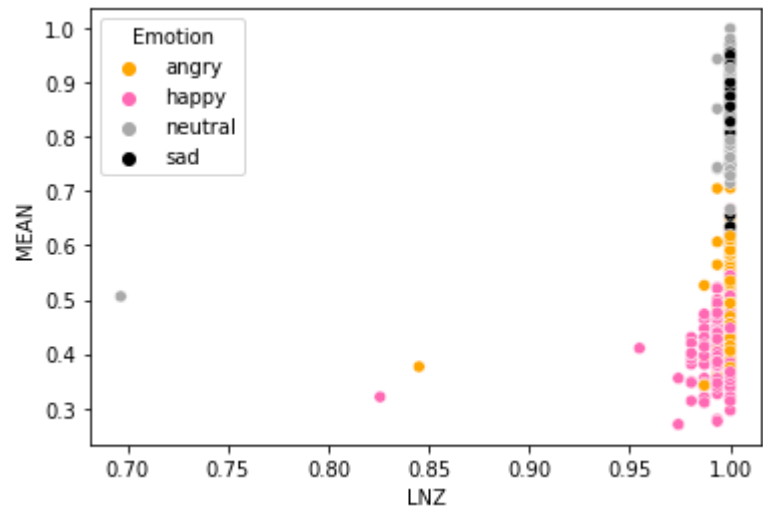
Correctly Classified Instances	513	64.125 %
Incorrectly Classified Instances	287	35.875 %
Kappa statistic	0.5217	
Mean absolute error	0.2105	
Root mean squared error	0.3428	
Relative absolute error	56.1455 %	
Root relative squared error	79.157 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,675	0,105	0,682	0,675	0,678	0,572	0,903	0,690	angry
	0,730	0,108	0,692	0,730	0,710	0,611	0,911	0,723	happy
	0,585	0,132	0,597	0,585	0,591	0,456	0,864	0,582	neutral
	0,575	0,133	0,590	0,575	0,582	0,445	0,856	0,577	sad
Weighted Avg.	0,641	0,120	0,640	0,641	0,641	0,521	0,883	0,643	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
135	63	2	0	a = angry
54	146	0	0	b = happy
2	1	117	80	c = neutral
7	1	77	115	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 1 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_young_red_150_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LN2
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 1 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

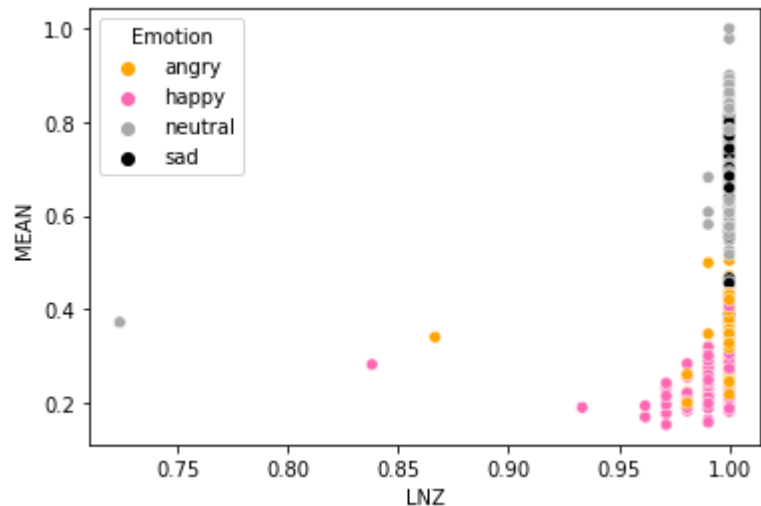
Correctly Classified Instances	490	61.25 %
Incorrectly Classified Instances	310	38.75 %
Kappa statistic	0.4833	
Mean absolute error	0.1933	
Root mean squared error	0.4349	
Relative absolute error	51.5405 %	
Root relative squared error	100.4322 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,595	0,128	0,607	0,595	0,601	0,470	0,736	0,469	angry
	0,645	0,127	0,629	0,645	0,637	0,514	0,767	0,501	happy
	0,630	0,130	0,618	0,630	0,624	0,497	0,748	0,498	neutral
	0,580	0,132	0,595	0,580	0,587	0,452	0,745	0,460	sad
Weighted Avg.	0,613	0,129	0,612	0,613	0,612	0,483	0,749	0,482	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
119	74	1	6	a = angry
70	129	0	1	b = happy
1	1	126	72	c = neutral
6	1	77	116	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 5 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_young_red_150_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LN2
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 5 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

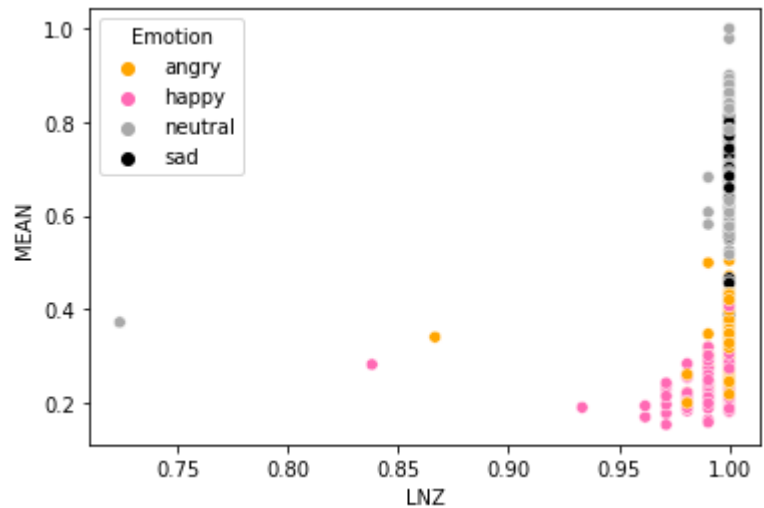
Correctly Classified Instances	493	61.625 %
Incorrectly Classified Instances	307	38.375 %
Kappa statistic	0.4883	
Mean absolute error	0.2128	
Root mean squared error	0.3577	
Relative absolute error	56.7373 %	
Root relative squared error	82.6125 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,640	0,125	0,631	0,640	0,635	0,512	0,869	0,635	angry
	0,670	0,118	0,654	0,670	0,662	0,547	0,894	0,644	happy
	0,525	0,110	0,614	0,525	0,566	0,438	0,857	0,593	neutral
	0,630	0,158	0,570	0,630	0,599	0,457	0,840	0,536	sad
Weighted Avg.	0,616	0,128	0,617	0,616	0,615	0,489	0,865	0,602	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
128	70	0	2	a = angry
66	134	0	0	b = happy
1	1	105	93	c = neutral
8	0	66	126	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 9 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_young_red_150_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 9 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

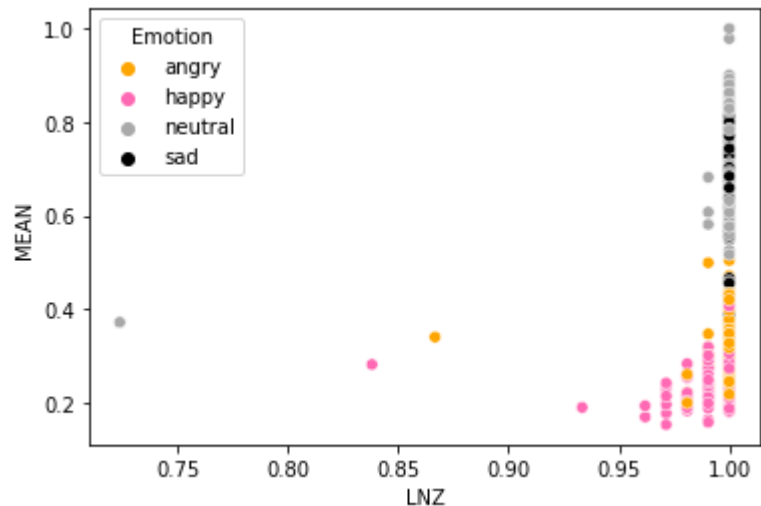
Correctly Classified Instances	508	63.5	%
Incorrectly Classified Instances	292	36.5	%
Kappa statistic	0.5133		
Mean absolute error	0.2137		
Root mean squared error	0.3451		
Relative absolute error	56.9875	%	
Root relative squared error	79.7076	%	
Total Number of Instances	800		

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,645	0,107	0,668	0,645	0,656	0,545	0,889	0,650	angry
	0,725	0,120	0,668	0,725	0,695	0,589	0,905	0,677	happy
	0,530	0,107	0,624	0,530	0,573	0,448	0,874	0,634	neutral
	0,640	0,153	0,582	0,640	0,610	0,472	0,859	0,559	sad
Weighted Avg.	0,635	0,122	0,635	0,635	0,634	0,514	0,882	0,630	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
129	71	0	0	a = angry
55	145	0	0	b = happy
1	1	106	92	c = neutral
8	0	64	128	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 1 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_young_red_50_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LN2
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 1 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

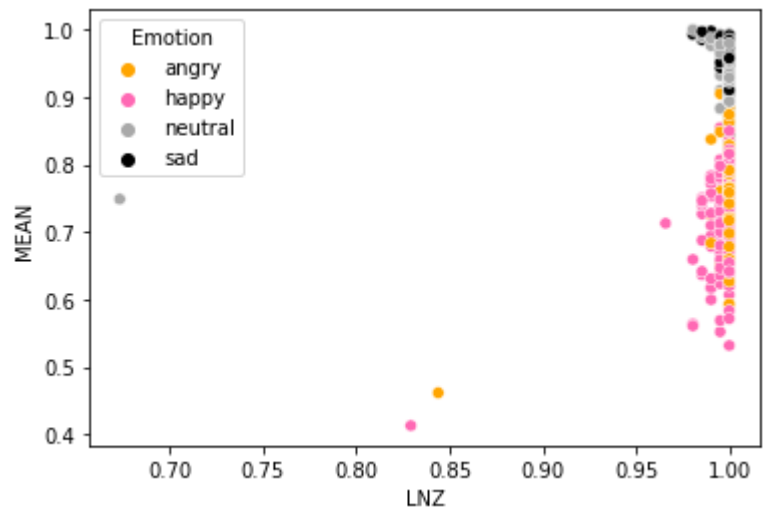
Correctly Classified Instances	440	55	%
Incorrectly Classified Instances	360	45	%
Kappa statistic	0.4		
Mean absolute error	0.2255		
Root mean squared error	0.4699		
Relative absolute error	60.1323 %		
Root relative squared error	108.5272 %		
Total Number of Instances	800		

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,580	0,153	0,558	0,580	0,569	0,421	0,721	0,432	angry
	0,585	0,128	0,603	0,585	0,594	0,461	0,738	0,463	happy
	0,515	0,155	0,526	0,515	0,520	0,362	0,682	0,400	neutral
	0,520	0,163	0,515	0,520	0,517	0,355	0,692	0,408	sad
Weighted Avg.	0,550	0,150	0,550	0,550	0,550	0,400	0,708	0,426	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
116	73	3	8	a = angry
79	117	3	1	b = happy
5	3	103	89	c = neutral
8	1	87	104	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 5 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_young_red_50_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 5 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

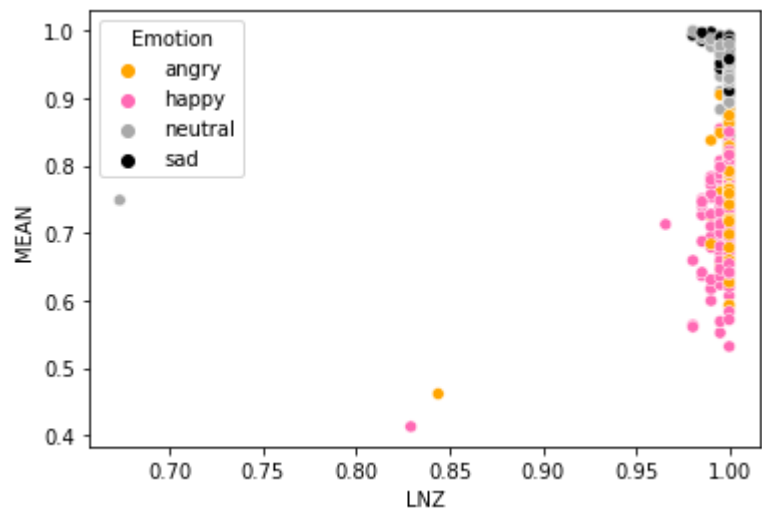
Correctly Classified Instances	460	57.5	%
Incorrectly Classified Instances	340	42.5	%
Kappa statistic	0.4333		
Mean absolute error	0.2292		
Root mean squared error	0.367		
Relative absolute error	61.1302	%	
Root relative squared error	84.7512	%	
Total Number of Instances	800		

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,650	0,163	0,570	0,650	0,607	0,467	0,861	0,573	angry
	0,545	0,117	0,609	0,545	0,575	0,445	0,864	0,613	happy
	0,540	0,140	0,563	0,540	0,551	0,406	0,838	0,545	neutral
	0,565	0,147	0,562	0,565	0,564	0,418	0,832	0,548	sad
Weighted Avg.	0,575	0,142	0,576	0,575	0,574	0,434	0,849	0,570	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
130	67	2	1	a = angry
88	109	3	0	b = happy
3	2	108	87	c = neutral
7	1	79	113	d = sad



=== Run information ===

Scheme: weka.classifiers.lazy.IBk -K 9 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A
 \"weka.core.EuclideanDistance -R first-last\""
 Relation: voice_young_red_50_up-weka.filters.unsupervised.attribute.Remove-R1,3
 Instances: 800
 Attributes: 3
 Emotion
 MEAN
 LNZ
 Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

IB1 instance-based classifier
 using 9 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances	467	58.375 %
Incorrectly Classified Instances	333	41.625 %
Kappa statistic	0.445	
Mean absolute error	0.2349	
Root mean squared error	0.3602	
Relative absolute error	62.6466 %	
Root relative squared error	83.1731 %	
Total Number of Instances	800	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,655	0,173	0,557	0,655	0,602	0,458	0,866	0,594	angry
	0,525	0,113	0,607	0,525	0,563	0,433	0,874	0,617	happy
	0,525	0,118	0,597	0,525	0,559	0,425	0,854	0,553	neutral
	0,630	0,150	0,583	0,630	0,606	0,468	0,846	0,558	sad
Weighted Avg.	0,584	0,139	0,586	0,584	0,582	0,446	0,860	0,580	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
131	66	3	0	a = angry
92	105	3	0	b = happy
3	2	105	90	c = neutral
9	0	65	126	d = sad

