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RESEARCH TITLE

GENDER CLASSIFICATION (MALE / FEMALE) THROUGH VOICE

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Abstract

Proceeding from the importance of sound in practical life and that it is involved in many fields, we set out with the idea of this project, which makes the computer a tool used to classify human voices and identify the identity of the speaker, whether he is male or female, and since the voice is the summary and the string of sentences, it was necessary to research In the nature of sound and its physical properties, we focused our attention on one of the properties of sound, which is frequency, as the system measures the frequency of the sound signal. The research relied on randomly collected sounds, and then processing this data using the automatic correlation technique to classify gender, male or female, in the right ways, using one of the sound characteristics, which is frequency. The results that have been reached are the success of the classification process for both sexes according to sound quality. Noise, noise and microphone quality directly affect the results of the system in classification, which leads to inaccurate results. Also, the more noise-free the recorded audio signal, the more accurate the results. The efficiency of the autocorrelation technique in calculating the value of the signal frequency.

عنوان البحث

تصنيف النوع (ذكر – انثي) من خلال الصوت

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المستخلص

انطلاقا من أهمية الصوت في الحياة العملية وانخراطه في العديد من المجالات ، انطلقنا بفكرة هذا المشروع الذي يجعل الكمبيوتر أداة تستخدم لتصنيف الأصوات البشرية والتعرف على هوية المتحدث سواء كان هو ذكر أو أنثى ، وبما أن الصوت هو الخلاصة وسلسلة الجمل ، كان من الضروري البحث في طبيعة الصوت وخصائصه الفيزيائية ، ركزنا انتباهنا على إحدى خصائص الصوت وهي التردد ، يقيس النظام تردد الإشارة الصوتية. اعتمد البحث على الأصوات التي تم جمعها عشوائياً ، ومن ثم معالجة هذه البيانات باستخدام تقنية الارتباط الآلي لتصنيف الجنس ، ذكراً كان أم أنثى ، بالطرق الصحيحة ، باستخدام إحدى خصائص الصوت وهي التردد. والنتائج التي تم التوصل إليها هي نجاح عملية التصنيف لكلا الجنسين حسب جودة الصوت. التشويش والضوضاء وجودة الميكروفون تؤثر بشكل مباشر على نتائج النظام في التصنيف مما يؤدي إلى نتائج غير دقيقة. كذلك كلما كانت الاشارة الصوتية المسجلة خالية من الضوضاء كانت النتائج أكثر دقة ، كفاءة تقنية الارتباط الذاتي في حساب قيمة تردد الإشارة.

1. Introduction:

The human voice is the most compatible medium for human interaction. When sound comes out of the vocal tract, it carries a lot of regional, dynamic, and logical atmospheric data. Using these types of information, we can learn about human language, gender, age, dialect, emotional and current state. (40).

Gender recognition is a technique for identifying gender categories by analyzing a speaker's vocal cues (41)(42).

(43)(44). Moreover, we can see how effective a gender classification system is in many advanced fields such as medical fields in identifying COVID-19 disease - through voice and commercial fields, forensic investigation, robotics, security system, and more.

2. RELATED STUDIES

In paper(45) Comparison is drawn between male and female larynges on the basis of overall size, vocal fold membranous length, elastic properties of tissue, and prephonatory glottal shape,in paper(46) An investigation has been reported to determine the importance of sound frequencies, pitch, and source spectrum slope on sound classification. Eight professional singers sang five common vowels on four common tones, and in a forced-choice test, vocal teachers rated the pronunciation as tone, baritone, or bass. Measurements of spoken vowel sounds reveal higher pitched frequencies in the tenor type and lower frequencies in the bass type, This paper (47) presents a pitch-range (PR) based feature set for age and gender classification. The performance of the proposed feature set is compared with MFCCs, energy, relative spectral transform–perceptual linear prediction (RASTA_PLP), and fundamental frequency (F0). Voice activity detection (VAD) is performed to extract speech utterances before feature extraction. Two different classifiers, k-Nearest Neighbors (kNN) and Support Vector Machines (SVM) are used in order to evaluate the effectiveness of the feature sets, in paper(48) It includes developing a gender model for gender recognition from a speech signal. In our current system fuzzy logic is used and

The neural network approach did not produce the exact required result for gender classification due to the complexity of the training network.

To overcome this problem, various evolutionary algorithms such as Genetic Algorithm (GA) are applied in sex classification.in paper(49) Gender classification of audio data. The agenda is to determine gender, using five different algorithms: Discriminant Linear Analysis (LDA), K-type Nearest Neighborhood (KNN), Classification and Regression Trees (CART), Random Forest (RF), and Supporting Vector Machine (SVM) based on eight different scales.in paper(50) A gender classifier was developed using two different data sets in different languages, English and Bahasa Indonesian. Each of the two data sets is represented by 20 audio features. Multi Layer Perceptron (MLP) is used to build the classification model using all these features and is trained only on the English dataset.

3.PROPOSED SYSTEM AND METHODS

The paper proposed a new method, which is to identify the gender (male/female) through the voice using the autocorrelation technique, and the focus was on one of

the sound characteristics, which is frequency.A. How the Proposed Solution work

A rating system consists of multiple stages, focusing on one of the characteristics of sound, which is frequency, to know the final result. Through which the entrance sound is classified by both sexes (whether male or female)The proposed system operates in the following stages:

- Inputs stage.
- sampling stage
- Pre-processing stage
- Classification stage

B. FUNCTIONAL FLOW DIAGRAM

The processing of model flow blew diagram figure 3.1.

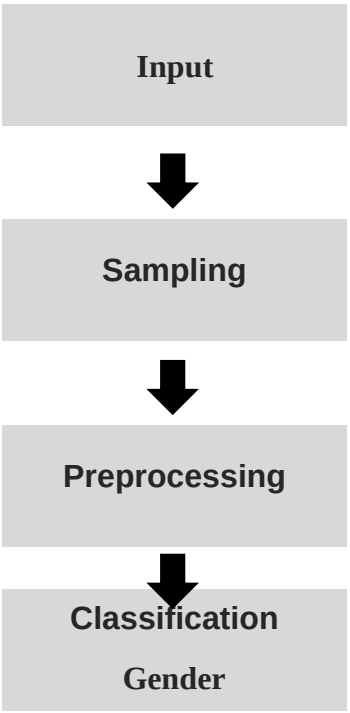

Figure 1: Shows the data flow diagram

The proposed system works in the following states:

1. **Inputs:**

At this stage, the system takes the audio signal to be categorized by either real-time recording or by bringing a saved load sound file. There are two ways of the input process, which are as follows:

- Real-time Record method.
- the method of fetching or fetching a saved audio file.

2. **Samples:**

the input signal is an analog signal, it is converted the analog signal into a digital signal.

3. **Preprocessing:**

The sound is filtered from noise or distortion so that the frequency is calculated more accurately

4. Classification:

This stage is considered one of the most important. At this stage, the basic frequency of the audio signal is calculated, from which a classification process is performed whether the input signal is male or female.

3.IMPLEMENTATION AND EVOLUTION OF SYSTEM

We have implemented these techniques in Matlab and Auto-Correlation software. Thus, it is important to determine the most appropriate approach to its application. As defined before, there are several stages to the performance of the type classification system

We randomly selected 30 samples, 15 male samples and 15 female samples, 13 samples that were correctly classified as males, and 14 samples that were correctly classified on the basis that they were female, as the system misclassified 3 sample from A out of 15 samples from the adult category that the system aims to classify according to their voices and frequencies.

Table 1: Sample diagnosed results and status.

الحالة	نتيجة التصنيف	تردد العينة	التردد الطبيعي للإناث	التردد الطبيعي للذكور	الجنس	الرقم
True	Male	138	186 – 250 Hz	75 – 185 Hz	Male	1
True	Male	167	186 – 250 Hz	75 – 185 Hz	Male	2
True	Male	138	186 – 250 Hz	75 – 185 Hz	Male	3
True	Male	105	186 – 250 Hz	75 – 185 Hz	Male	4
True	Male	154	186 – 250 Hz	75 – 185 Hz	Male	5
True	Male	174	186 – 250 Hz	75 – 185 Hz	Male	6
True	Male	129	186 – 250 Hz	75 – 185 Hz	Male	7
True	Male	163	186 – 250 Hz	75 – 185 Hz	Male	8
True	Male	127	186 – 250 Hz	75 – 185 Hz	Male	9
True	Male	110	186 – 250 Hz	75 – 185 Hz	Male	10
False	Female	250	186 – 250 Hz	75 – 185 Hz	Male	11
True	Male	157	186 – 250 Hz	75 – 185 Hz	Male	12
True	Male	145	186 – 250 Hz	75 – 185 Hz	Male	13
False	Female	200	186 – 250 Hz	75 – 185 Hz	Male	14
True	Male	167	186 – 250 Hz	75 – 185 Hz	Male	15
True	Male	145	186 – 250 Hz	75 – 185 Hz	Male	16
True	Male	122	186 – 250 Hz	75 – 185 Hz	Male	17
True	Male	162	186 – 250 Hz	75 – 185 Hz	Male	18
True	Male	100	186 – 250 Hz	75 – 185 Hz	Male	19
True	Male	114	186 – 250 Hz	75 – 185 Hz	Male	20
True	Male	80	186 – 250 Hz	75 – 185 Hz	Male	21
True	Male	98	186 – 250 Hz	75 – 185 Hz	Male	22

True	Male	130	186 – 250 Hz	75 – 185 Hz	Male	23
True	Male	149	186 – 250 Hz	75 – 185 Hz	Male	24
True	Male	132	186 – 250 Hz	75 – 185 Hz	Male	25
True	Male	163	186 – 250 Hz	75 – 185 Hz	Male	26
True	Male	164	186 – 250 Hz	75 – 185 Hz	Male	27
True	Male	121	186 – 250 Hz	75 – 185 Hz	Male	28
True	Male	115	186 – 250 Hz	75 – 185 Hz	Male	29
True	Male	109	186 – 250 Hz	75 – 185 Hz	Male	30
True	Male	103	186 – 250 Hz	75 – 185 Hz	Male	31
True	Male	77	186 – 250 Hz	75 – 185 Hz	Male	32
True	Male	81	186 – 250 Hz	75 – 185 Hz	Male	33
True	Male	94	186 – 250 Hz	75 – 185 Hz	Male	34
True	Male	100	186 – 250 Hz	75 – 185 Hz	Male	35
True	Male	164	186 – 250 Hz	75 – 185 Hz	Male	36
True	Male	126	186 – 250 Hz	75 – 185 Hz	Male	37
True	Male	117	186 – 250 Hz	75 – 185 Hz	Male	38
True	Male	141	186 – 250 Hz	75 – 185 Hz	Male	39
True	Male	96	186 – 250 Hz	75 – 185 Hz	Male	40
True	Male	85	186 – 250 Hz	75 – 185 Hz	Male	41
True	Male	74	186 – 250 Hz	75 – 185 Hz	Male	42
True	Male	79	186 – 250 Hz	75 – 185 Hz	Male	43
True	Male	110	186 – 250 Hz	75 – 185 Hz	Male	44
True	Male	113	186 – 250 Hz	75 – 185 Hz	Male	45
True	Male	161	186 – 250 Hz	75 – 185 Hz	Male	46
True	Male	100	186 – 250 Hz	75 – 185 Hz	Male	47
True	Male	85	186 – 250 Hz	75 – 185 Hz	Male	48
True	Male	75	186 – 250 Hz	75 – 185 Hz	Male	49
True	Male	78	186 – 250 Hz	75 – 185 Hz	Male	50
True	Male	119	186 – 250 Hz	75 – 185 Hz	Male	51
True	Male	123	186 – 250 Hz	75 – 185 Hz	Male	52
True	Male	155	186 – 250 Hz	75 – 185 Hz	Male	53
True	Male	163	186 – 250 Hz	75 – 185 Hz	Male	54
True	Male	147	186 – 250 Hz	75 – 185 Hz	Male	55
True	Male	100	186 – 250 Hz	75 – 185 Hz	Male	56
True	Male	99	186 – 250 Hz	75 – 185 Hz	Male	57
True	Male	106	186 – 250 Hz	75 – 185 Hz	Male	58
True	Male	119	186 – 250 Hz	75 – 185 Hz	Male	59
True	Male	123	186 – 250 Hz	75 – 185 Hz	Male	60
True	Male	147	186 – 250 Hz	75 – 185 Hz	Male	61

True	Male	163	186 – 250 Hz	75 – 185 Hz	Male	62
True	Male	110	186 – 250 Hz	75 – 185 Hz	Male	63
True	Male	104	186 – 250 Hz	75 – 185 Hz	Male	64
True	Male	70	186 – 250 Hz	75 – 185 Hz	Male	65
True	Male	86	186 – 250 Hz	75 – 185 Hz	Male	66
True	Male	127	186 – 250 Hz	75 – 185 Hz	Male	67
True	Male	91	186 – 250 Hz	75 – 185 Hz	Male	68
True	Male	163	186 – 250 Hz	75 – 185 Hz	Male	69
True	Male	77	186 – 250 Hz	75 – 185 Hz	Male	70
True	Male	164	186 – 250 Hz	75 – 185 Hz	Male	71
True	Male	150	186 – 250 Hz	75 – 185 Hz	Male	72
True	Male	111	186 – 250 Hz	75 – 185 Hz	Male	73
True	Male	125	186 – 250 Hz	75 – 185 Hz	Male	74
True	Male	161	186 – 250 Hz	75 – 185 Hz	Male	75
True	Male	149	186 – 250 Hz	75 – 185 Hz	Male	76
True	Male	109	186 – 250 Hz	75 – 185 Hz	Male	77
True	Male	114	186 – 250 Hz	75 – 185 Hz	Male	78
True	Male	127	186 – 250 Hz	75 – 185 Hz	Male	79
True	Male	135	186 – 250 Hz	75 – 185 Hz	Male	80
True	Male	140	186 – 250 Hz	75 – 185 Hz	Male	81
True	Male	158	186 – 250 Hz	75 – 185 Hz	Male	82
True	Male	145	186 – 250 Hz	75 – 185 Hz	Male	83
True	Male	163	186 – 250 Hz	75 – 185 Hz	Male	84
True	Male	73	186 – 250 Hz	75 – 185 Hz	Male	85
True	Male	159	186 – 250 Hz	75 – 185 Hz	Male	86
True	Male	144	186 – 250 Hz	75 – 185 Hz	Male	87
True	Male	162	186 – 250 Hz	75 – 185 Hz	Male	88
True	Male	100	186 – 250 Hz	75 – 185 Hz	Male	89
True	Male	115	186 – 250 Hz	75 – 185 Hz	Male	90
True	Male	103	186 – 250 Hz	75 – 185 Hz	Male	91
True	Male	85	186 – 250 Hz	75 – 185 Hz	Male	92
True	Male	74	186 – 250 Hz	75 – 185 Hz	Male	93
True	Male	113	186 – 250 Hz	75 – 185 Hz	Male	94
True	Male	133	186 – 250 Hz	75 – 185 Hz	Male	95
True	Male	139	186 – 250 Hz	75 – 185 Hz	Male	96
True	Male	163	186 – 250 Hz	75 – 185 Hz	Male	97
True	Male	161	186 – 250 Hz	75 – 185 Hz	Male	98
True	Male	108	186 – 250 Hz	75 – 185 Hz	Male	99
True	Male	128	186 – 250 Hz	75 – 185 Hz	Male	100

True	Male	76	186 – 250 Hz	75 – 185 Hz	Male	101
True	Male	89	186 – 250 Hz	75 – 185 Hz	Male	102
True	Male	122	186 – 250 Hz	75 – 185 Hz	Male	103
True	Male	142	186 – 250 Hz	75 – 185 Hz	Male	104
True	Male	128	186 – 250 Hz	75 – 185 Hz	Male	105
True	Male	110	186 – 250 Hz	75 – 185 Hz	Male	106
True	Male	95	186 – 250 Hz	75 – 185 Hz	Male	107
True	Male	114	186 – 250 Hz	75 – 185 Hz	Male	108
True	Male	160	186 – 250 Hz	75 – 185 Hz	Male	109
True	Male	157	186 – 250 Hz	75 – 185 Hz	Male	110
True	Male	133	186 – 250 Hz	75 – 185 Hz	Male	111
True	Male	122	186 – 250 Hz	75 – 185 Hz	Male	112
True	Male	137	186 – 250 Hz	75 – 185 Hz	Male	113
True	Male	155	186 – 250 Hz	75 – 185 Hz	Male	114
True	Male	109	186 – 250 Hz	75 – 185 Hz	Male	115
True	Male	150	186 – 250 Hz	75 – 185 Hz	Male	116
True	Male	79	186 – 250 Hz	75 – 185 Hz	Male	117
True	Male	124	186 – 250 Hz	75 – 185 Hz	Male	118
True	Male	131	186 – 250 Hz	75 – 185 Hz	Male	119
True	Male	130	186 – 250 Hz	75 – 185 Hz	Male	120
True	Male	99	186 – 250 Hz	75 – 185 Hz	Male	121
True	Male	105	186 – 250 Hz	75 – 185 Hz	Male	122
True	Male	112	186 – 250 Hz	75 – 185 Hz	Male	123
True	Male	137	186 – 250 Hz	75 – 185 Hz	Male	124
True	Male	163	186 – 250 Hz	75 – 185 Hz	Male	125
True	Male	125	186 – 250 Hz	75 – 185 Hz	Male	126
True	Male	88	186 – 250 Hz	75 – 185 Hz	Male	127
True	Male	128	186 – 250 Hz	75 – 185 Hz	Male	128
True	Male	75	186 – 250 Hz	75 – 185 Hz	Male	129
True	Male	81	186 – 250 Hz	75 – 185 Hz	Male	130
True	Male	129	186 – 250 Hz	75 – 185 Hz	Male	131
True	Male	154	186 – 250 Hz	75 – 185 Hz	Male	132
True	Male	161	186 – 250 Hz	75 – 185 Hz	Male	133
True	Male	120	186 – 250 Hz	75 – 185 Hz	Male	134
True	Male	111	186 – 250 Hz	75 – 185 Hz	Male	135
True	Male	101	186 – 250 Hz	75 – 185 Hz	Male	136
True	Male	89	186 – 250 Hz	75 – 185 Hz	Male	137
True	Male	131	186 – 250 Hz	75 – 185 Hz	Male	138
True	Male	95	186 – 250 Hz	75 – 185 Hz	Male	139

True	Male	121	186 – 250 Hz	75 – 185 Hz	Male	140
True	Male	127	186 – 250 Hz	75 – 185 Hz	Male	141
True	Male	163	186 – 250 Hz	75 – 185 Hz	Male	142
True	Male	151	186 – 250 Hz	75 – 185 Hz	Male	143
True	Male	142	186 – 250 Hz	75 – 185 Hz	Male	144
True	Male	110	186 – 250 Hz	75 – 185 Hz	Male	145
True	Male	93	186 – 250 Hz	75 – 185 Hz	Male	146
True	Male	128	186 – 250 Hz	75 – 185 Hz	Male	147
True	Male	130	186 – 250 Hz	75 – 185 Hz	Male	148
True	Male	164	186 – 250 Hz	75 – 185 Hz	Male	149
True	Male	112	186 – 250 Hz	75 – 185 Hz	Male	150
True	Female	250	186 – 250 Hz	75 – 185 Hz	Female	151
True	Female	205	186 – 250 Hz	75 – 185 Hz	Female	152
True	Female	250	186 – 250 Hz	75 – 185 Hz	Female	153
True	Female	242	186 – 250 Hz	75 – 185 Hz	Female	154
True	Female	235	186 – 250 Hz	75 – 185 Hz	Female	155
True	Female	211	186 – 250 Hz	75 – 185 Hz	Female	156
True	Female	222	186 – 250 Hz	75 – 185 Hz	Female	157
True	Female	211	186 – 250 Hz	75 – 185 Hz	Female	158
True	Female	222	186 – 250 Hz	75 – 185 Hz	Female	159
False	Male	167	186 – 250 Hz	75 – 185 Hz	Female	160
True	Female	229	186 – 250 Hz	75 – 185 Hz	Female	161
True	Female	250	186 – 250 Hz	75 – 185 Hz	Female	162
True	Female	211	186 – 250 Hz	75 – 185 Hz	Female	163
True	Female	229	186 – 250 Hz	75 – 185 Hz	Female	164
True	Female	195	186 – 250 Hz	75 – 185 Hz	Female	165
True	Female	200	186 – 250 Hz	75 – 185 Hz	Female	166
True	Female	220	186 – 250 Hz	75 – 185 Hz	Female	167
True	Female	190	186 – 250 Hz	75 – 185 Hz	Female	168
True	Female	214	186 – 250 Hz	75 – 185 Hz	Female	169
True	Female	250	186 – 250 Hz	75 – 185 Hz	Female	170
True	Female	199	186 – 250 Hz	75 – 185 Hz	Female	171
True	Female	203	186 – 250 Hz	75 – 185 Hz	Female	172
True	Female	223	186 – 250 Hz	75 – 185 Hz	Female	173
True	Female	234	186 – 250 Hz	75 – 185 Hz	Female	174
True	Female	197	186 – 250 Hz	75 – 185 Hz	Female	175
True	Female	188	186 – 250 Hz	75 – 185 Hz	Female	176
True	Female	209	186 – 250 Hz	75 – 185 Hz	Female	177

True	Female	222	186 – 250 Hz	75 – 185 Hz	Female	178
True	Female	236	186 – 250 Hz	75 – 185 Hz	Female	179
True	Female	194	186 – 250 Hz	75 – 185 Hz	Female	180
True	Female	205	186 – 250 Hz	75 – 185 Hz	Female	181
True	Female	188	186 – 250 Hz	75 – 185 Hz	Female	182
True	Female	224	186 – 250 Hz	75 – 185 Hz	Female	183
True	Female	249	186 – 250 Hz	75 – 185 Hz	Female	184
True	Female	242	186 – 250 Hz	75 – 185 Hz	Female	185
True	Female	233	186 – 250 Hz	75 – 185 Hz	Female	186
True	Female	205	186 – 250 Hz	75 – 185 Hz	Female	187
True	Female	200	186 – 250 Hz	75 – 185 Hz	Female	188
True	Female	187	186 – 250 Hz	75 – 185 Hz	Female	189
True	Female	195	186 – 250 Hz	75 – 185 Hz	Female	190
True	Female	213	186 – 250 Hz	75 – 185 Hz	Female	191
True	Female	250	186 – 250 Hz	75 – 185 Hz	Female	192
True	Female	200	186 – 250 Hz	75 – 185 Hz	Female	193
True	Female	231	186 – 250 Hz	75 – 185 Hz	Female	194
True	Female	241	186 – 250 Hz	75 – 185 Hz	Female	195
True	Female	219	186 – 250 Hz	75 – 185 Hz	Female	196
True	Female	210	186 – 250 Hz	75 – 185 Hz	Female	197
True	Female	201	186 – 250 Hz	75 – 185 Hz	Female	198
True	Female	195	186 – 250 Hz	75 – 185 Hz	Female	199
True	Female	199	186 – 250 Hz	75 – 185 Hz	Female	200
True	Female	220	186 – 250 Hz	75 – 185 Hz	Female	201
True	Female	214	186 – 250 Hz	75 – 185 Hz	Female	202
True	Female	235	186 – 250 Hz	75 – 185 Hz	Female	203
True	Female	228	186 – 250 Hz	75 – 185 Hz	Female	204
True	Female	204	186 – 250 Hz	75 – 185 Hz	Female	205
True	Female	191	186 – 250 Hz	75 – 185 Hz	Female	206
True	Female	891	186 – 250 Hz	75 – 185 Hz	Female	207
True	Female	211	186 – 250 Hz	75 – 185 Hz	Female	208
True	Female	200	186 – 250 Hz	75 – 185 Hz	Female	209
True	Female	195	186 – 250 Hz	75 – 185 Hz	Female	210
True	Female	231	186 – 250 Hz	75 – 185 Hz	Female	211
True	Female	249	186 – 250 Hz	75 – 185 Hz	Female	212
True	Female	212	186 – 250 Hz	75 – 185 Hz	Female	213
True	Female	208	186 – 250 Hz	75 – 185 Hz	Female	214

True	Female	202	186 – 250 Hz	75 – 185 Hz	Female	215
True	Female	196	186 – 250 Hz	75 – 185 Hz	Female	216
True	Female	186	186 – 250 Hz	75 – 185 Hz	Female	217
True	Female	211	186 – 250 Hz	75 – 185 Hz	Female	218
True	Female	202	186 – 250 Hz	75 – 185 Hz	Female	219
True	Female	233	186 – 250 Hz	75 – 185 Hz	Female	220
True	Female	195	186 – 250 Hz	75 – 185 Hz	Female	221
True	Female	250	186 – 250 Hz	75 – 185 Hz	Female	222
True	Female	224	186 – 250 Hz	75 – 185 Hz	Female	223
True	Female	213	186 – 250 Hz	75 – 185 Hz	Female	224
True	Female	191	186 – 250 Hz	75 – 185 Hz	Female	225
True	Female	203	186 – 250 Hz	75 – 185 Hz	Female	226
True	Female	214	186 – 250 Hz	75 – 185 Hz	Female	227
True	Female	244	186 – 250 Hz	75 – 185 Hz	Female	228
True	Female	249	186 – 250 Hz	75 – 185 Hz	Female	229
True	Female	187	186 – 250 Hz	75 – 185 Hz	Female	230
True	Female	212	186 – 250 Hz	75 – 185 Hz	Female	231
True	Female	227	186 – 250 Hz	75 – 185 Hz	Female	232
True	Female	239	186 – 250 Hz	75 – 185 Hz	Female	233
True	Female	225	186 – 250 Hz	75 – 185 Hz	Female	234
True	Female	195	186 – 250 Hz	75 – 185 Hz	Female	235
True	Female	191	186 – 250 Hz	75 – 185 Hz	Female	236
True	Female	198	186 – 250 Hz	75 – 185 Hz	Female	237
True	Female	201	186 – 250 Hz	75 – 185 Hz	Female	238
True	Female	238	186 – 250 Hz	75 – 185 Hz	Female	239
True	Female	200	186 – 250 Hz	75 – 185 Hz	Female	240
True	Female	250	186 – 250 Hz	75 – 185 Hz	Female	241
True	Female	216	186 – 250 Hz	75 – 185 Hz	Female	242
True	Female	222	186 – 250 Hz	75 – 185 Hz	Female	243
True	Female	248	186 – 250 Hz	75 – 185 Hz	Female	244
True	Female	200	186 – 250 Hz	75 – 185 Hz	Female	245
True	Female	214	186 – 250 Hz	75 – 185 Hz	Female	246
True	Female	234	186 – 250 Hz	75 – 185 Hz	Female	247
True	Female	249	186 – 250 Hz	75 – 185 Hz	Female	248
True	Female	229	186 – 250 Hz	75 – 185 Hz	Female	249
True	Female	230	186 – 250 Hz	75 – 185 Hz	Female	250
True	Female	222	186 – 250 Hz	75 – 185 Hz	Female	251

True	Female	198	186 – 250 Hz	75 – 185 Hz	Female	252
True	Female	202	186 – 250 Hz	75 – 185 Hz	Female	253
True	Female	238	186 – 250 Hz	75 – 185 Hz	Female	254
True	Female	250	186 – 250 Hz	75 – 185 Hz	Female	255
True	Female	224	186 – 250 Hz	75 – 185 Hz	Female	256
True	Female	195	186 – 250 Hz	75 – 185 Hz	Female	257
True	Female	212	186 – 250 Hz	75 – 185 Hz	Female	258
True	Female	221	186 – 250 Hz	75 – 185 Hz	Female	259
True	Female	247	186 – 250 Hz	75 – 185 Hz	Female	260
True	Female	208	186 – 250 Hz	75 – 185 Hz	Female	261
True	Female	241	186 – 250 Hz	75 – 185 Hz	Female	262
True	Female	187	186 – 250 Hz	75 – 185 Hz	Female	263
True	Female	191	186 – 250 Hz	75 – 185 Hz	Female	264
True	Female	200	186 – 250 Hz	75 – 185 Hz	Female	265
True	Female	239	186 – 250 Hz	75 – 185 Hz	Female	266
True	Female	202	186 – 250 Hz	75 – 185 Hz	Female	267
True	Female	210	186 – 250 Hz	75 – 185 Hz	Female	268
True	Female	233	186 – 250 Hz	75 – 185 Hz	Female	269
True	Female	241	186 – 250 Hz	75 – 185 Hz	Female	270
True	Female	230	186 – 250 Hz	75 – 185 Hz	Female	271
True	Female	201	186 – 250 Hz	75 – 185 Hz	Female	272
True	Female	195	186 – 250 Hz	75 – 185 Hz	Female	273
True	Female	211	186 – 250 Hz	75 – 185 Hz	Female	274
True	Female	218	186 – 250 Hz	75 – 185 Hz	Female	275
True	Female	206	186 – 250 Hz	75 – 185 Hz	Female	276
True	Female	235	186 – 250 Hz	75 – 185 Hz	Female	277
True	Female	217	186 – 250 Hz	75 – 185 Hz	Female	278
True	Female	221	186 – 250 Hz	75 – 185 Hz	Female	279
True	Female	250	186 – 250 Hz	75 – 185 Hz	Female	280
True	Female	199	186 – 250 Hz	75 – 185 Hz	Female	281
True	Female	185	186 – 250 Hz	75 – 185 Hz	Female	282
True	Female	208	186 – 250 Hz	75 – 185 Hz	Female	283
True	Female	200	186 – 250 Hz	75 – 185 Hz	Female	284
True	Female	219	186 – 250 Hz	75 – 185 Hz	Female	285
True	Female	229	186 – 250 Hz	75 – 185 Hz	Female	286
True	Female	232	186 – 250 Hz	75 – 185 Hz	Female	287
True	Female	244	186 – 250 Hz	75 – 185 Hz	Female	288

True	Female	248	186 – 250 Hz	75 – 185 Hz	Female	289
True	Female	188	186 – 250 Hz	75 – 185 Hz	Female	290
True	Female	250	186 – 250 Hz	75 – 185 Hz	Female	291
True	Female	220	186 – 250 Hz	75 – 185 Hz	Female	292
True	Female	213	186 – 250 Hz	75 – 185 Hz	Female	293
True	Female	227	186 – 250 Hz	75 – 185 Hz	Female	294
True	Female	243	186 – 250 Hz	75 – 185 Hz	Female	295
True	Female	204	186 – 250 Hz	75 – 185 Hz	Female	296
True	Female	234	186 – 250 Hz	75 – 185 Hz	Female	297
True	Female	229	186 – 250 Hz	75 – 185 Hz	Female	298
True	Female	212	186 – 250 Hz	75 – 185 Hz	Female	299
True	Female	200	186 – 250 Hz	75 – 185 Hz	Female	300

Table 2: shows frequency and percent of health and positive samples.

	Frequency	Percent
Male	148	43.30%
False parcent for male	2	6.6%
Female	149	46.70%
False Percent For female	1	3%
Total	300	100%

4. Conclusions:

Recently, the importance of sound in practical life has emerged as it enters into many fields, and the science of sound is a modern and developed science, and many are still seeking to delve into this science because of its importance. Reaching this In developing this field, we encountered some difficulties in collecting information on the subject of the research, but, thank God, the system was implemented and implemented successfully.

5.Future work:

Some ideas are provided in this paper for future work. Future work is some suggestions to improve the proposed approach to female voice ordering, and to improve a new technique for classification.

Finally, the proposed technique is applied to male and female voices, with the exception of children's voices because the results were inaccurate because the frequency of their voices was too high..

6. RESULTS:

- Success rating for both sexes by sound
- The system was tested on 30 male and female samples, and the system test success rate was the same, while the error rate was
- Noise, noise, and microphone quality directly affect the rating system results, leading to inaccurate results
- The more noise and distortion the recorded audio signal is, the more accurate the results will be
- The efficiency of the autocorrelation technique in calculating the value of the signal frequency

7. DISCUSSION:

Using a wide variety of human voices from the target group gives better results and better evaluation of the system, In this system, how much is targeting the adult group to classify them, so we recommend developing the system by integrating a set of mechanisms to be able to classify the age groups as a whole,Taking into account the recording of sounds in places free from noise and noise, and the use of a high-quality and sensitive microphone in picking up sounds with high accuracy so that the results are more accurate

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