

A Survey on Gender Identification

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Abstract: Gender identification is considered to be one of the major problems in the field of signal processing. Formerly, this problem has been solved using various image classification techniques which typically includes information extraction from a set of images. However, gender classification using vocal features has recently been a topic of interest to a lot of researchers across the globe.

Keywords: Voice, Gender identification, etc.

I. INTRODUCTION

A close scrutiny of some of the human vocal features reveals that classifying gender goes way beyond just the frequency and the pitch of a person. One of the most challenging problems faced in machine learning is feature selection or as is technically known as dimensional reduction. A similar problem is faced while deciding gender-specific traits-which serve a significant purpose in classifying the gender of a person. This paper will inspect the efficiency and significance of machine learning algorithms to the voice-based gender identification problem. This voice based gender detection can be used for classifying user and displaying related products for online shopping

II. LITERATURE SURVEY

Since there are only two categories of response values in the dataset, the problem is narrowed down to binary classification. Any general classification algorithm such as Logistic Regression, Support Vector Machine, Nearest Neighbours, Discriminant Analysis etc. can be applied on the data.

These techniques are by far, the most commonly used machine learning algorithms. [8] Kuynu Chen, in his work, shows that the discriminant analysis classifier gives the most interesting results in terms of test error rate and precision. However, even this model still suffers from a test error rate of greater than 10% [10] Becker's study on a dataset similar to ours, shows that in order to gain a deeper understanding of the model and to determine the exact properties that indicate a gender of a person, a classification and regression tree (CART) should be applied. His results indicate that the mode frequency (mode) serves as a root node for detecting

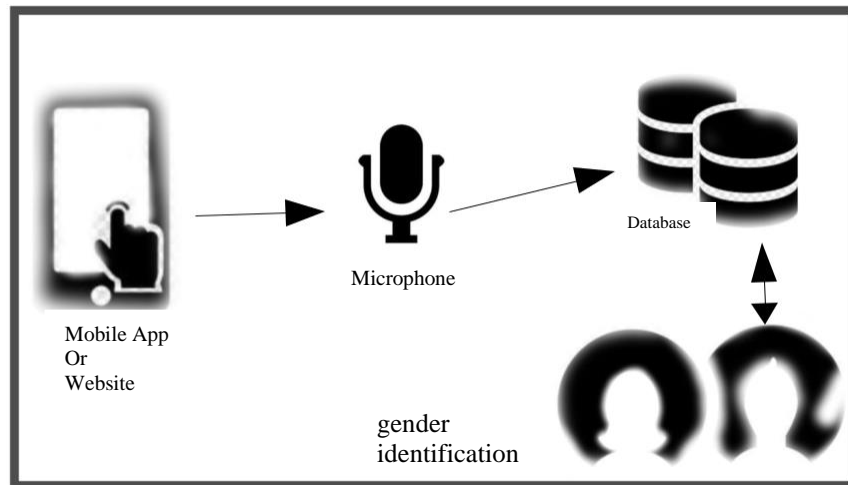
III. PROBLEM DEFINITION

Gender identification is considered to be one of the major problems in the field of signal processing. Formerly, this problem has been solved using various image classification techniques which typically includes information extraction from a set of images but voice-based gender classification.

VI. SYSTEM ALGORITHM

1. Start
2. User gives input to the system via Website or android application.
3. Via API we process the signal
4. Gender identification done at server side
5. Output shown to the user
6. Stop

V. PROPOSE SYSTEM



VI. CONCLUSION

In order to understand gender-specific characteristics, it is important to eliminate all the insignificant features from the model. By the end of the experimental study, it can be concluded that a great level of accuracy can be achieved by selecting some specific features. This will reduce the overall model training time, model complexity and also increase inference simplicity.

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