**Gender Voice Classifier**

This project aims to classify genders based on voice characteristics using machine learning algorithms. It includes preprocessing, feature extraction, model training, and evaluation processes.

**Table of Contents**

* Introduction
* Installation
* Usage
* Dataset
* Project Structure
* Results
* Contributing

**Introduction**

Gender classification based on voice characteristics is a fundamental task with numerous applications such as speech recognition and virtual assistants. This project explores the efficacy of various machine learning algorithms in accurately identifying gender from voice data.

**Installation**

To run the project, ensure you have Python installed. Clone this repository and install the required dependencies using:

**Copy code**

**pip install -r requirements.txt**

**Usage**

Prepare your dataset or use the provided voice.csv dataset.

Run the Jupyter Notebook Gender\_Voice\_Classifier.ipynb to preprocess the data, train the models, and evaluate their performance.

Explore different machine learning algorithms and tune hyperparameters for improved results.

**Dataset**

The dataset used in this project contains voice recordings from both male and female speakers. Each record includes various voice features such as mean frequency, standard deviation, and others.

**Project Structure**

**Gender\_Voice\_Classifier.ipynb:** Jupyter Notebook containing the project code.

**README.md:** This file providing an overview of the project.

**requirements.txt:** File listing the required dependencies.

**voice.csv:** Dataset used for training and evaluation.

**Results**

The project achieved promising results with various machine learning algorithms. Detailed performance metrics and analysis can be found in the notebook.

**Contributing**

Contributions are welcome! If you have suggestions for improvements or new features, please open an issue or create a pull request.