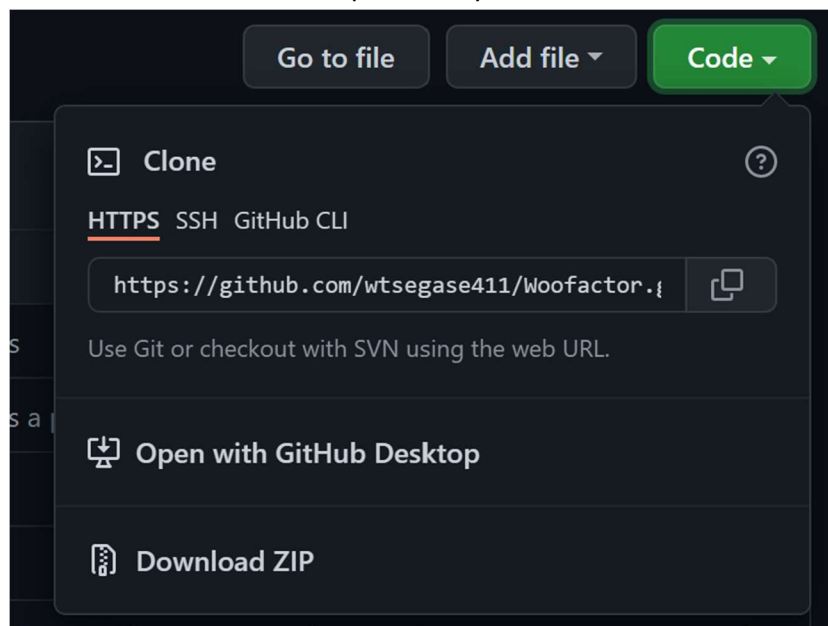


Software User Guide

Howton, J., Kim, J., Osmon, L., Tsegaselassie, W.

Installation Steps

Clone or download the repository



Navigate to the Code tab in the GitHub repository and either download the ZIP or copy the URL for cloning. If cloning, navigate to the desired directory and execute “git clone [url]” to grab the latest version otherwise unzip the downloaded file.

Installing packages

The following packages are required: **matplotlib**. Either install using the command line with the command “pip install [package name]” or install via an IDE like PyCharm.

Running the Predictor

The main algorithm that the user will interface with is predictor.py. Inside of the directory or through an IDE run predictor.py.

```
Would you like to generate a model? (Y/N)
```

The user is prompted to generate a model. If this is the first time predictor.py is run the user will need to input “Y” to create a model based on the existing data. Any time data is adjusted a new model should be generated, however given an invalid prompt the value will default to N.

```
Would you like to generate a model? (Y/N)Y  
Play music? (Y/N)|
```

The next prompt determines whether the output from the algorithm will be played aloud by the synthesizer. The default given an invalid prompt is N.

```
Would you like to generate a model? (Y/N)Y
Play music? (Y/N)N
What key would you like the final out put to be in?
```

The user is then given the choice of the key of the output. Any major or minor key is valid and the user will be prompted again if the input is invalid. A major key, A, B, C, D, E, F, G can be changed into a minor key by including an 'm' after the key.

```
Would you like to generate a model? (Y/N)Y
Play music? (Y/N)N
What key would you like the final out put to be in? C
Comma separated list of chords in roman numeral form:
```

The next prompt is for the initial data provided to the algorithm. The user must input a comma separated list of chords in the form of Roman numerals. This input will be used to predict the next chord progression.

```
Would you like to generate a model? (Y/N)Y
Play music? (Y/N)N
What key would you like the final out put to be in? C
Comma separated list of chords in roman numeral form: I, V, II
| I | V | II | V | V | V | V | IV | I | I |
| C | G | Dm | G | G | G | G | F | C | C |
Generate another? ('stop') to end:
```

The final prompt allows the user to generate another progression from new input otherwise the program will terminate when the user inputs “stop”