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Final Project Proposal

We will be working on speech synthesis and expanded applications in Python for our final project. Using Python's wave library and analysis of our own formants and consonants, we plan to code a program that will create and write to a wave file. This program will take in text formatted in Arpabet and convert it into frequencies to be generated and written into a wave file. These frequencies for consonants and formants will then be smoothed together to create a more natural-sounding word. This project will not likely require any training or test sets.

We plan to expand this speech synthesizer, contingent on the difficulty of the project. Various improvements are available, including a parser that converts natural English into Arpabet for full text-to-speech. In addition, a useful feature could be analysis of a user-given vocal sound in order to synthesize speech in their vocal range. This program would accept a wave file of the user saying some specific vowel, and then calculate the frequency of their glottal buzz from that sound file. This frequency could then be used to generate sound files for every English phoneme to be used with the basic speech synthesizer.