

Project Overview: We wanted to create a program that will generate a song by a given artist based on the artist's songs. Lyrics would be downloaded using a self-made parser made specifically for azlyrics.com. Given the artist's page, which contains all the songs he or she has sung, we download all of the lyrics for that artist and insert it into our Markov Chain algorithm. We then use Markov Chains to randomly generate a new title and a new song.

Implementation: We used the standard Python libraries, and Pattern. The first step to running the program was to download all of the song lyrics for a particular artists, a process made simpler by Pattern. It would parse through each HTML page containing the lyrics and extract the lyrics in a meaningful format. This was fairly easy to accomplish because in the HTML page, the lyrics would start at '<!-- start of lyrics -->' and end at '<!-- end of lyrics -->'.

The lyrics would then be sent into the Markov Chain generator so we can create a dictionary mapping words and phrases (or prefixes) to possible next words (suffixes). We then use this probability based dictionary of prefixes and suffixes (or the Markov chains) in order to randomly generate new rhymes. Dictionaries made this program possible because of their convenience and usability when it comes to Markov Chains. For someone to run this program, they would just have to compile and run the .py file. You can change the artist by finding the corresponding azlyrics.com song page for an artist (look at the .py file for a 2chainz example).

Results: We created a Markov text synthesizer. It is not very good but it works
Our sample rap song or 2 Chainz (excuse the profanity)

Think About It

nonchalant Trust me rude boy to see when you are yoooooooouu Nothing in the whole
m bout it Click full a particle Pardon though I my belt buckle Cocaine on
in my eyes all you money then you got speech 40 in my waist line
of the ashtray put it glance upon the beauty and t stunnin these niggas I
my pajamas designer She got gettin started like when I came Or at least until
t giva damn What I I turnt Up Pockets Full told him please believe it

Ball Beautiful Pain

trapathon See I done have I should make a checklist gonna start up a riot
like I own it my a button then the top nigga little pretty boy Real
in the snow suit Get was a boy wearing Bugle Oh Lord O M G
on my six pack Yeah my Tec 9 Say you slide through I can see
word Ye ain t never time Life is a getting got great ears Cause the
t from the A all some flicks in Ghosta I height Forever clever napalm mics

2 We Own

I call doin the 69 the last time I smoke room floor look like a

yeah my entourage is bucking Rest in peace to all after party for the after
Southside lean with the my handle it She need some name the lil baby Mercedes
like the old Diddy on my birthday I deserve to dates still trial My rep
no romance in life that quiet lame niggas be quiet soil good to my hood
Counting so much money I place I m only in on my baby I m

Reflection: We had first decided to code a program that would play the wikirace for us as quickly as it can. Then we realized that downloading each wiki page from the internet took around 5 secs. This meant that unless we downloaded all of the wikipedia pages, the program would take a very long time which defeated the purpose of the program. After we switched our project to random lyrics generator using the Markov's chain the project went more smoothly. We split up the work and had good communication throughout working on the project. There are main markov's libraries available online but we tried to create our own markov's method to create the lyric. This resulted in very poor sentences that didnt really make sense. With more time, we can definitely improve our method and produce better lyrics that make sense which we are both interested in doing. This was a very fun project to do and I hope