Paradata for Sonifing my Model

* This digital history remix of a 3D model was created to attempt to explore different lenses with which an artifact can be observed through. By taking raw data, in this case coordinates of vertices that map a 3D object, and creating something new in a new form of media it opens the doors of perception and moves towards a better understanding of what an observer, or listener, is perceiving. This resource could be used in any means in which someone is 3D modeling or attempting to remix a digital resource. This remix of a digital artifact is sustainable for as long as a MP3 file is playable, otherwise it would have to be converted into a different more sustainable digital audio format. The technology that allowed this to be created was relatively simple and free of cost for the most part. This technology was selected primarily for ease of use as I possess little experience the field of digital remixing, however the result was above satisfactory despite the basic technology and my basic knowledge. The project was interesting due to the ways in which it failed at first. It was interesting to discover the root of the problems, which were primarily the selection of the numerical values that represent the coordinates. If enough time was put in, considering how many numerical values are available in one model, someone could theoretically create a proper song that featured chord progression, consistent rhythm, and a percussion aspect that followed a specific pattern throughout the duration.
* Sublime Text, a free program for Windows and Mac, was used to extract the numbers that comprised the coordinates of the vertices of the 3D model. Once the values were extracted they were put into the Musical Algorithms website which allows for numerical data to be turned into music free of charge. Since the values were between 0 and 2 for the most part, the decimal place had to be moved to attempt to create values fit into one of the 88 keys on a piano. The values were also rounded to simplify the process. Six individual numerical values were taken and put into voice 1, the process was repeated with voice 2 and 3. To add a bit of length, the 6 individual number values were copied and pasted to double the original 6 to 12 and then doubled them again to get to 24, basically each voice was 4 copies of 6 individual number values which each pertained to a vertex in the original 3D model.
* When it was first played it was found that the number values that were put in were either really high notes or really low notes on the piano. To attempt to fix, the pitch mapping was adjusted to 4—60 for voice 1 (which is intended to be the lead instrument), 15—30 for voice 2 (which is intended to be the bass instrument, and 20—50 for voice 3 (which is intended to be the procession instrument). The duration input was then adjusted and all values were changed from zero (0) to one (1), and changed all values of six (6) were changed to five (5), this was done so that none of the notes were too long or otherwise skipped over entirely if they had a zero (0) value. Due to the way of mirroring those 6 numerical values into 24 values, the bass and the percussion elements worked well but the lead part sounded far too monotonous. After returning to the original numerical data for the vertices, 24 random values were selected in the hopes of creating a lead part that had much more variety. After plugging in these new values the result was exactly as hoped and it sounded something like an out of key guitar solo which was perfectly satisfactory for what was being attempted.
* The MIDI file was exported from Musical Algorithms and imported into Garage Band which is a free program for Mac. Using this program allowed for the instruments to be adjusted to create the desired sound. A heavily distorted lead guitar was used for voice 1 which features the random numerical values as mentioned above. The bass was altered to sound more like a funk bass and the drums donned a Southern California style and sound. Garage Band was then used to once again remix the song by looping some parts and moving other parts around with the intention of creating something that somewhat resembled a traditional rock song. After a bit of work, the final product came together and despite several remixes still vaguely represents the numerical data pertaining to a 3D model. As mentioned in the first paragraph, there are literally endless combinations of songs that could be created using this method and a single 3D object file of numerical coordinates of vertices. By hand picking more of the coordinates someone could theoretically create a variety of different music provided the individual had experience with the piano and an understanding of composition.