Assignment 1

For this assignment I've compared several different versions of the famous tune and jazz standard Blue Bossa. The tune was originally composed by Kenny Dorham, but it's first appearance on a recording was on Joe Henderson's Page One, from 1963. Other versions that are included in this comparison are those of Dexter Gordon (alto-sax), Jimmy Rosenberg (guitar), George Benson (guitar), Pat Martino (guitar), and perhaps the least expected Bobby McFerrin (vocals). I've put these recordings in a single playlist, and then extracted the audio features.

The first thing I noticed when I extracted the audio features of the tracks, was that the keys were wrong. Every version in this comparison (and probably every version you've ever heard) is in C minor, with a small modulation to D flat major in the middle of every chorus. However, Spotify seems to recognize these versions as F minor (fourth degree and subdominant of C minor), C# major (enharmonically the same as Db major), or G# major (enharmonically the same as the dominant of Db major). All of these keys are somehow related to the actual key or the key that is being modulated to, but are in essence guessed incorrectly.

The tempo's differ a lot. The original by Joe Henderson is around 80 bpm, and so are the versions of Dexter Gordon and Jimmy Rosenberg. Pat Martino's and Bobby McFerrin's versions are significantly faster with tempo's around 130 bpm, and George Benson is right in the middle with approximately 100 bpm.

Interestingly, the valence of the tracks do not vary that much. The valence ranges from 0.592 to 0.785, and four out of six are in between 0.710 and 7.85. This makes me wonder what kind of criteria define valence as variable. Harmony is the first thing that comes into my mind, because that is the most obvious similarity in these tracks.