**Guidelines for Project**

**To Do’s:**

Project Specification paper (**2 - 4 pages due 02/27/17**)

1. 6 - 8 sources on polyphonic pitch detection (Adar)
2. 6 - 8 sources on beat/rhythm detection (Colin)
3. 4 - 6 sources on other important MIR concepts, Machine learning, etc. (Hector)
4. A description of the proposed project
5. Timeline with specific objectives
6. Role of each team member.
7. Description of the tools, data sets, and associate literature that we are using
8. Bibliography with 15-20 sources

**Steps:**

1. Consolidate libraries to use
2. Develop polyphonic pitch extraction
3. Build Beat Detection
4. Combine algorithms
5. Generate simple accompaniment (using guitar and piano as test inputs)
6. Develop programs for more complex accompaniment
7. …

**Data Sets:**

1. <http://www.audiocontentanalysis.org/data-sets/>
2. <https://labrosa.ee.columbia.edu/millionsong/>

**Beat Detection:**

Parameters

- time signature

- tempo? (slow, med, fast)

- instruments to include?

**Polyphonic Pitch Extraction:**

Parameters

- key

- instrumentation

- genre