* **What is the problem you want to solve?**

Music is the most popular art form that is performed and listened to by billions of people every day. There are many genres of music such as pop, classical, jazz, folk etc.

A music genre describes a style of music that has similar characteristics shared by its members and can be distinguished from other types of music. These characteristics are usually related to the instrumentation, rhythm, harmony, and melody of the music. we address a specific multiclass problem that is **music genre classification**, of which the goal is to classify songs to their correct genre.

Generally, the genre classification process of music has two main steps: feature extraction and classification. The first step obtains audio signal information, while the second one classifies the music into various genres according to extracted features.

* **Who is your client and why do they care about this problem? In other words, what will your client do or decide based on your analysis that they wouldn’t have done otherwise?**

Our client is one of the digital music services that gives access to users millions of songs and other related authors content. We would like to help our client by analyzing music data to classify them based genre and that would be first step toward the recommendation system music recognition. This system can help our client’s users to listen the more available songs close to their musical taste.

* **What data are you using? How will you acquire the data?**

We use the [GTZAN](http://marsyas.info/downloads/datasets.html) dataset which has been the most widely used in the music genre classification task. The dataset contains 30-second audio files including 10 different genres including reggae, classical, country, jazz, metal, pop, disco, hiphop, rock and blues.

* **Briefly outline how you’ll solve this problem. Your approach may change later, but this is a good first step to get you thinking about a method and solution.**

We need to collect the data and the first step is data preparation, to find out which attribute has missing value and can be filled with the default values or can be dropped. To classify music genre, two main steps should be completed: feature extraction and classification. The first step obtains audio signal information, while the second one classifies the music into various genres according to extracted features.

* **What are your deliverables? Typically, this includes code, a paper, or a slide deck**

Deliverables can be implemented code to solve issue, generated graph to demonstrates the correlation of attributes (if there is any), power point presentation or any type of documents that can show the result of this investigation.