It all started with a beat… and a question. What kind of music is this? As a connoisseur of left-field and Avant-garde electronic music, I find myself asking this question too often**.** My goal with this project is to employ the use of Machine Learning techniques to help *better distinguish the genre classification of electronic music songs*.

The majority of this project builds upon the techniques and method of *Audio Based Genre Classification of Electronic Music* (Kirss, 2007*).*  However, python’s scikit-learn will be deployed along with a completely different dataset of music.

The dataset: <https://www.kaggle.com/caparrini/beatsdataset>

Each row is an electronic music song. The dataset contains 100 song for each genre among 23 electronic music genres, they were the top (100) songs of their genres on November 2016. The 71 columns are **audio features** extracted of a two random minutes sample of the file audio. These features have been extracted using pyAudioAnalysis (<https://github.com/tyiannak/pyAudioAnalysis>).

Proposal: What genre of electronic music is this song?

* Perform machine learning algorithms to selected features [from this Kaggle dataset](o%09https:/www.kaggle.com/caparrini/beatsdataset). Compare different models for most accurate feature selection by employing scikit-learn for the following algorithms:
  + Liner logistic regression
  + K-nearest neighbors
  + Naïve Bayes
  + Support Vector Machines
  + Classification via regression
  + Linear Logistic Regression
  + Random Forest
* Intended technologies employed
  + Python’s scikit-learn, pandas and matplotlib library will be employed for the use of Machine Learning Techniques
  + Findings and analysis will be presented via web dashboard or online notebook.

Proposed Results: A table with classification scores for each model



Kirss, Priit. “Audio Based Genre Classification of Electronic Music.” *Music, Mind and Technology*, University of Jyväskylä, 2007, jyx.jyu.fi/bitstream/handle/123456789/13592/1/URN\_NBN\_fi\_jyu-2007601.pdf.