AcousticBrainz

http://acousticbrainz.org

Disrupting the music tech space with Open Data

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MusicBrainz

d03bff61-26fc-301b-98ac-4d8e85771cbc
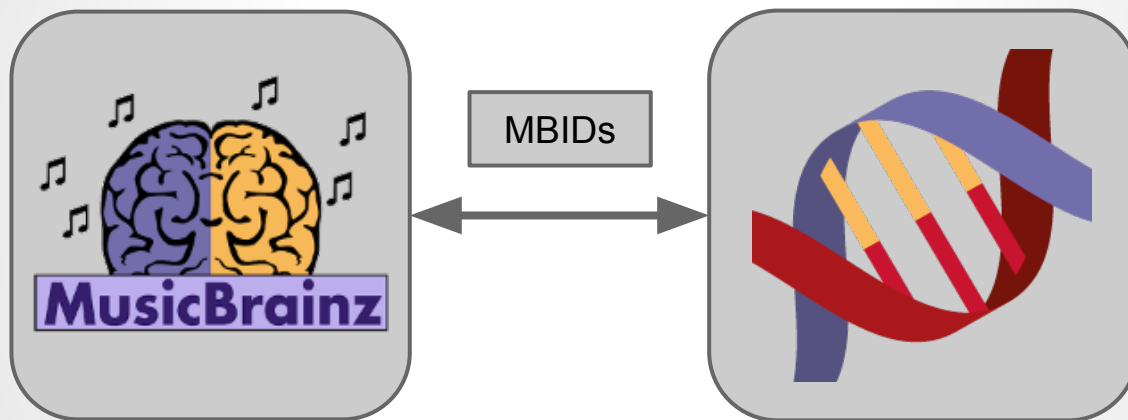
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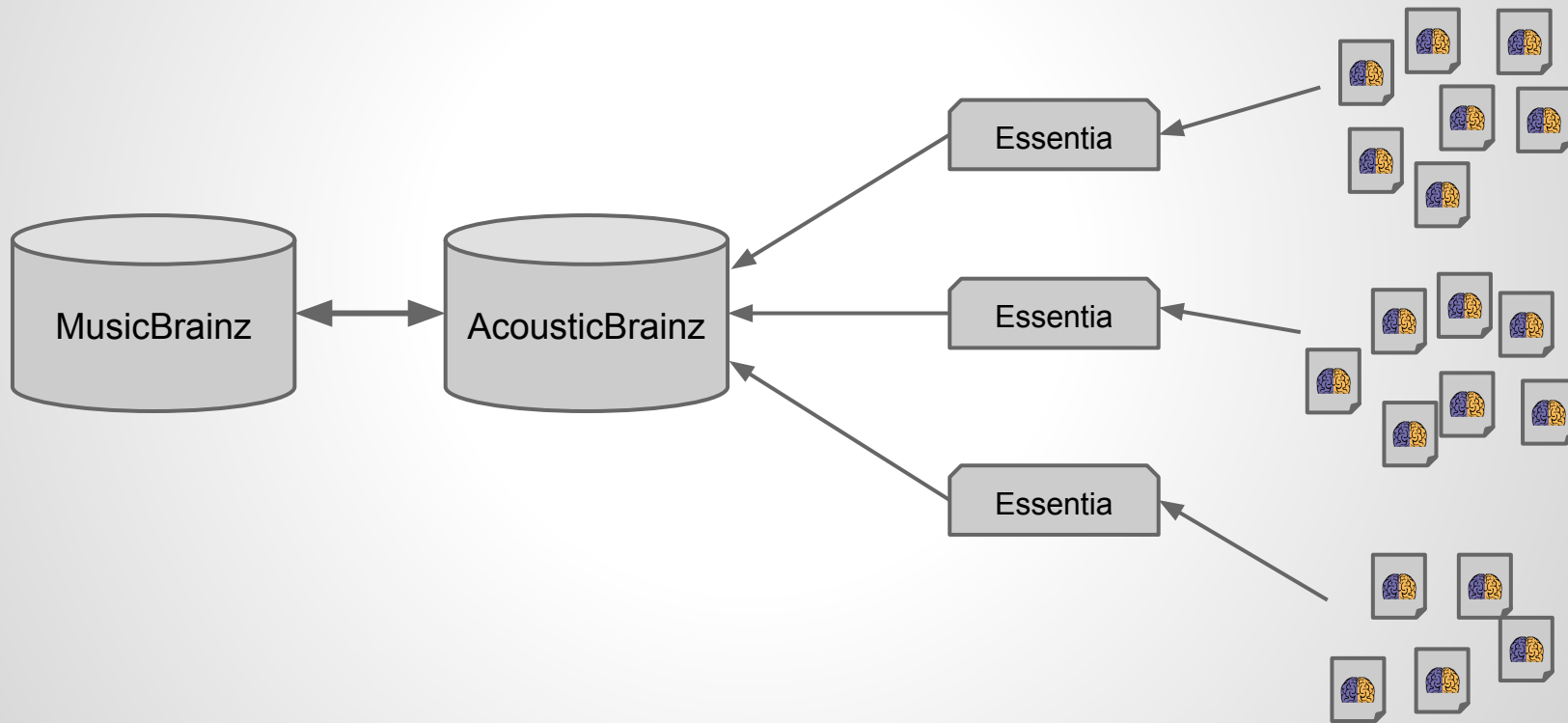
AcousticBrainz

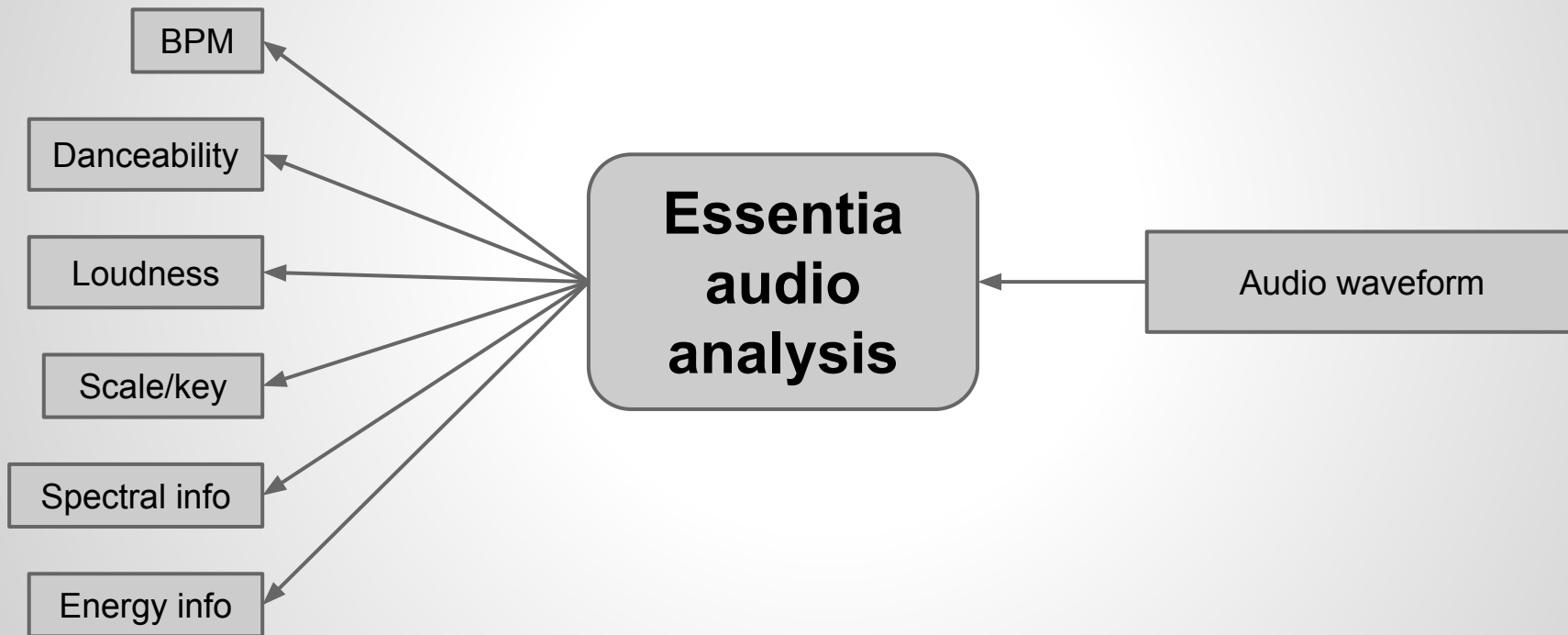# We can all be Paul Lamere

(Well, we can try to be **that** cool.)

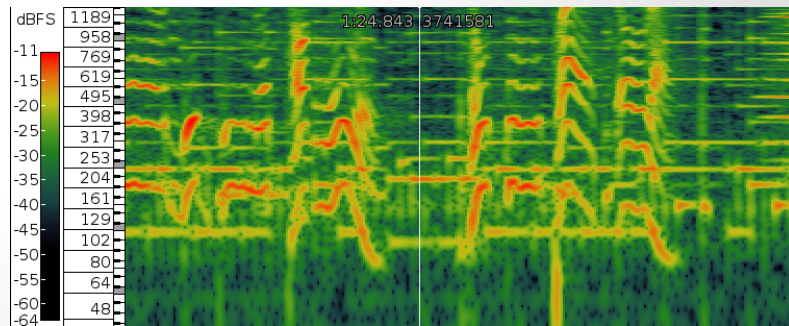# Crowd sourcing data

Low level analysis
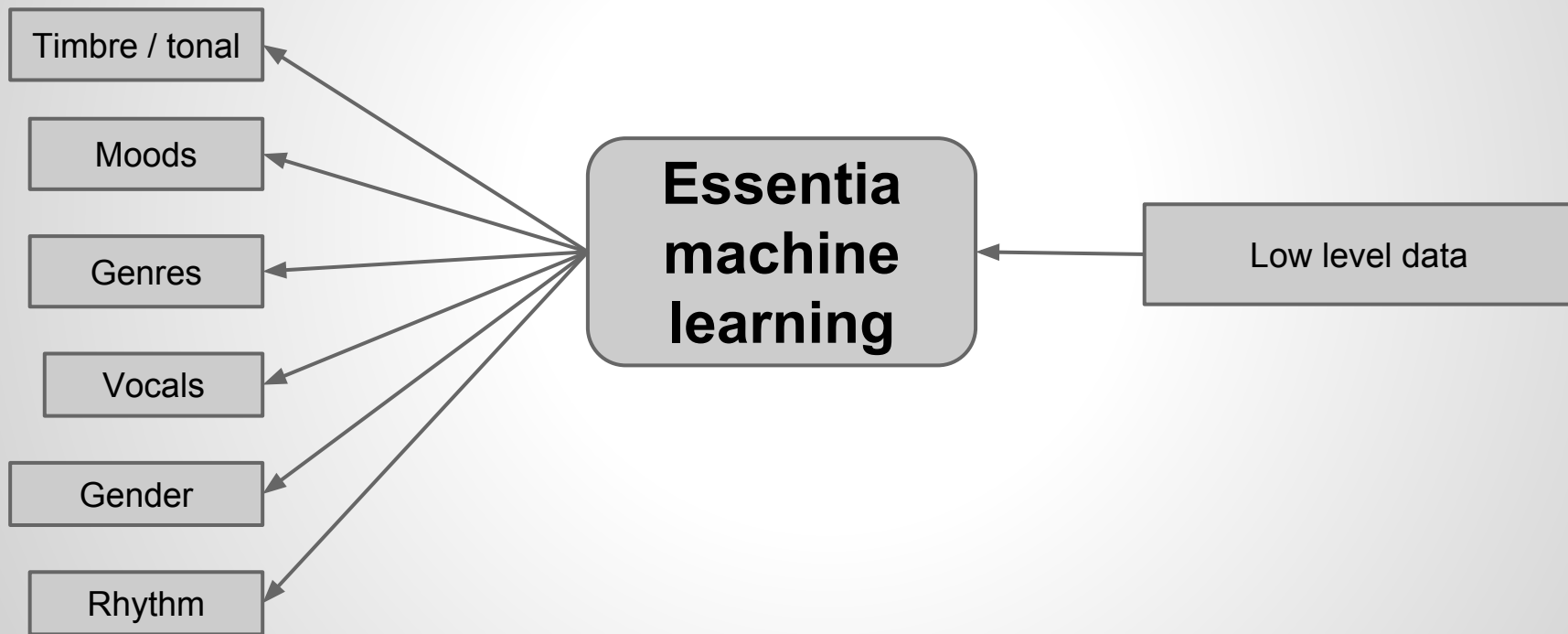
Low-level data

The low level data consists of:

- Loudness, complexity, dissonance
- Energy, spectral characteristics
- Rhythm, BPM
- Scale, Key
- Zero crossings
- Other DSP voodoo

High level analysis

High-level data

The high-level data consists of:

- Tonal, timbre, vocals/instrumental, gender
- Moods: Electronic, party, aggressive, happy, sad, relaxed.
- Mirex moods.
- Genres: Rosamerica, Dortmund, Tzanetakis & electronica
- ISMIR rhythm (ballroom)

Releasing data

Yesterday we released our first data set:

- 650,000+ tracks of data
- almost 500,000 unique tracks of data
- Low-level data: 13GB
- High-level data: 648MB
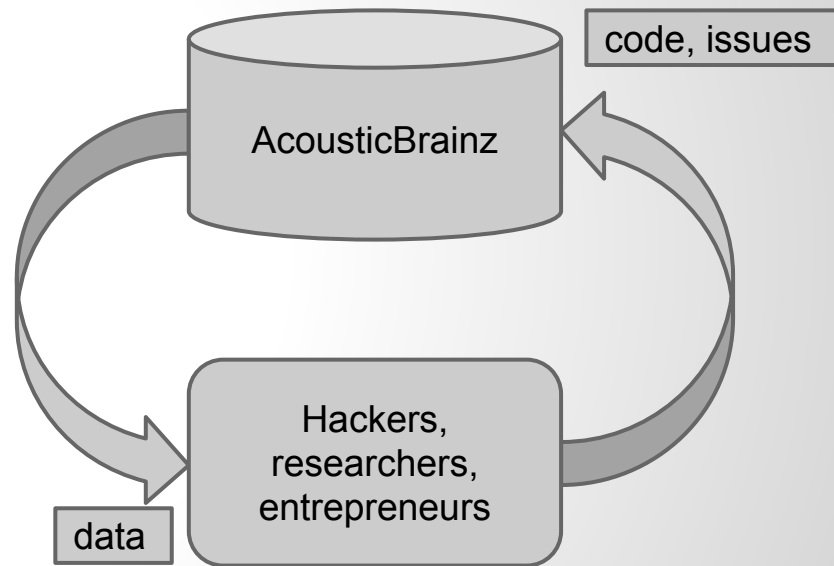
Most important: **CC0 license**.

Feedback loop

Geeks use the AcousticBrainz data…
… and will find issues.

Geeks will come up with better ways of doing things…
… and will share code with AcousticBrainz.

AcousticBrainz will incorporate the best changes …
… and run the improved code over the data.

Geeks use the new and improved data…
… and will find more issues.

Disrupting the industry

Walled gardens suck.

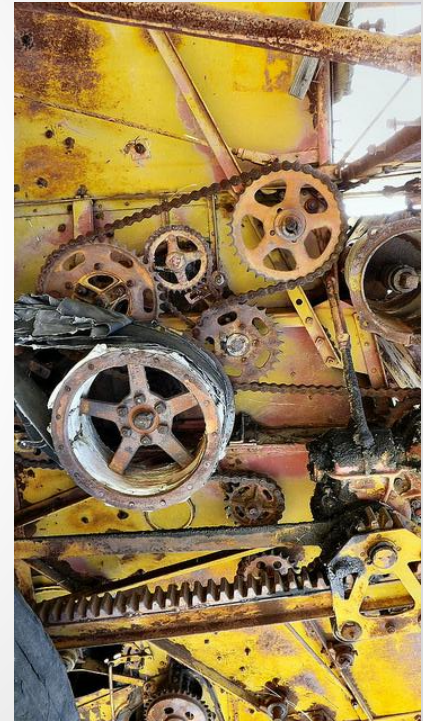There is Latent demand for hacking on discovery.

We're opening this data so that everyone can play and innovate.

Spur innovation

1. Disrupt
2. Raise the discovery bar
3. Focus on algorithms, not data
4. Simplify complex systems
5. Compelling user interfaces
6. Give control to the user

Leveling the playing field

1. Disrupt the walled gardens
2. Remove discovery bias
3. Create new interoperable tools
4. Crowd source discovery
5. Improve artist discovery
6. Profit! (for the little bands)

Dammit Jim, I'm an engineer,
not a graphic designer!

Data quality

The low-level data is solid -- it is based on long standing research.

The high-level data is OK -- but it needs work.

We're very early on in this project, we can't expect it to be perfect.

Cunningham's law -- we're going to use it!

Preliminary results

We have some interesting results from one week of data crunching.

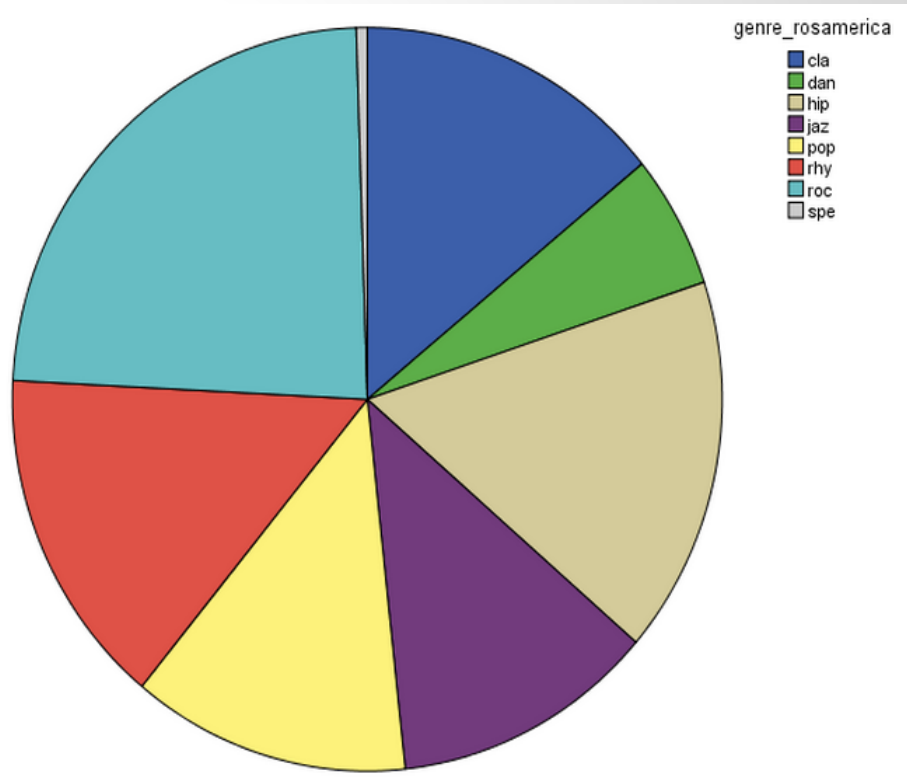Many thanks to Professor Emilia Gómez (@emiligogu) at UPF/MTG!

Genre distribution

The rosamerica genre training set seems to be most complete.

This looks like a reasonable genre distribution. The other sets need much more training.

genre_rosamerica
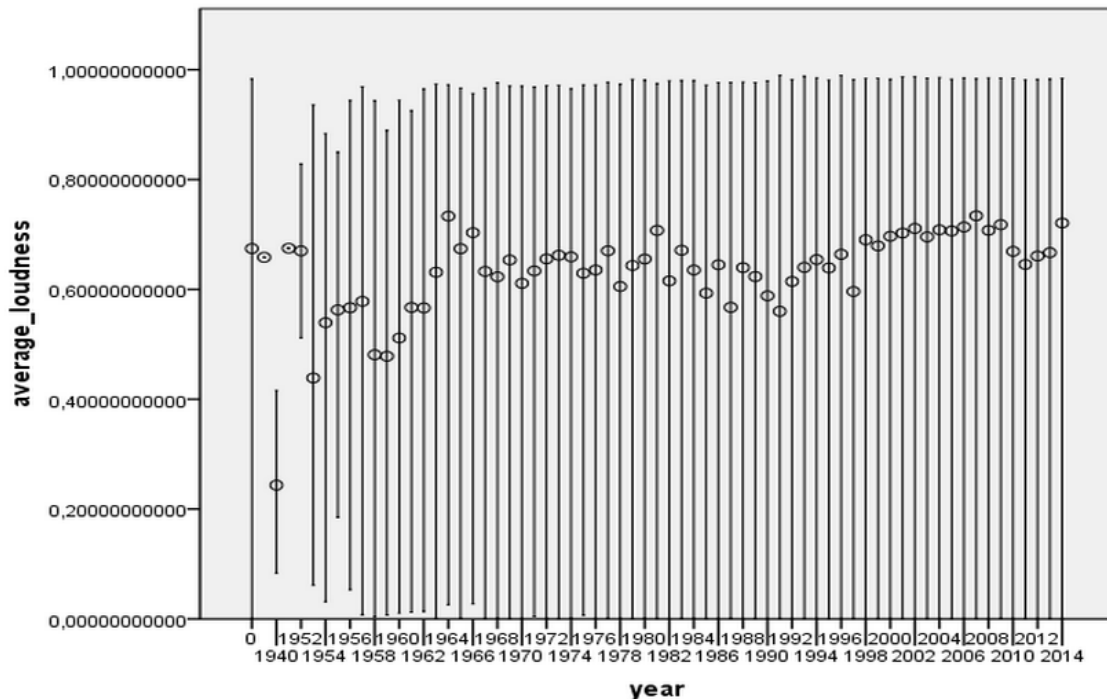- cla
- dan
- hip
- jaz
- pop
- rhy
- roc
- spe

Loudness wars?

Is recorded music getting louder over time?

A little bit, but really, the data is not conclusive.

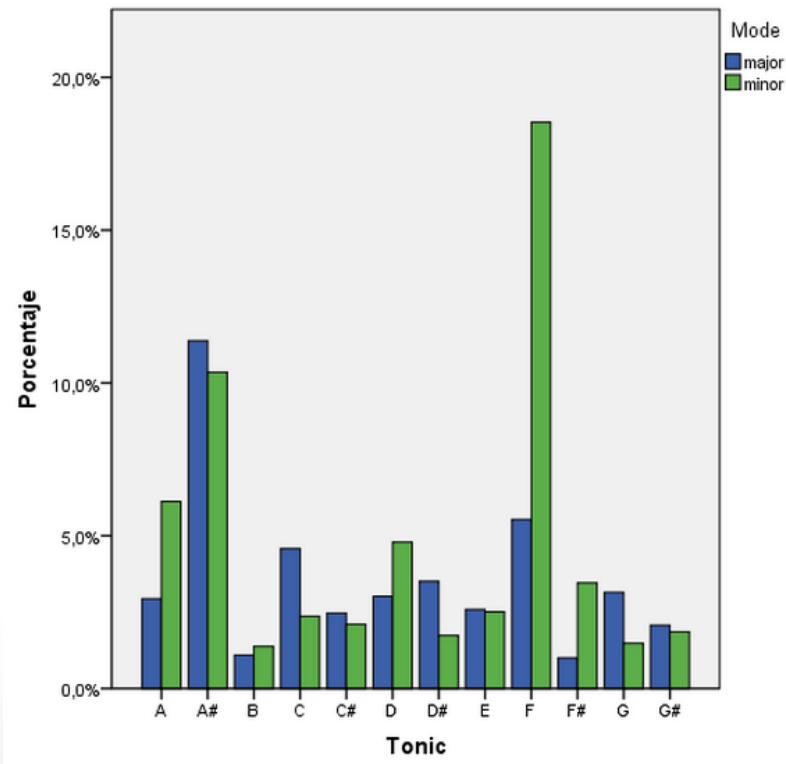**Loudness** distribution along time , average loudness...

Key distribution

What musical keys/scales are the most popular?

It seems that its F minor.

We're skeptical of this since we expect a lot of rock music to be E/A.
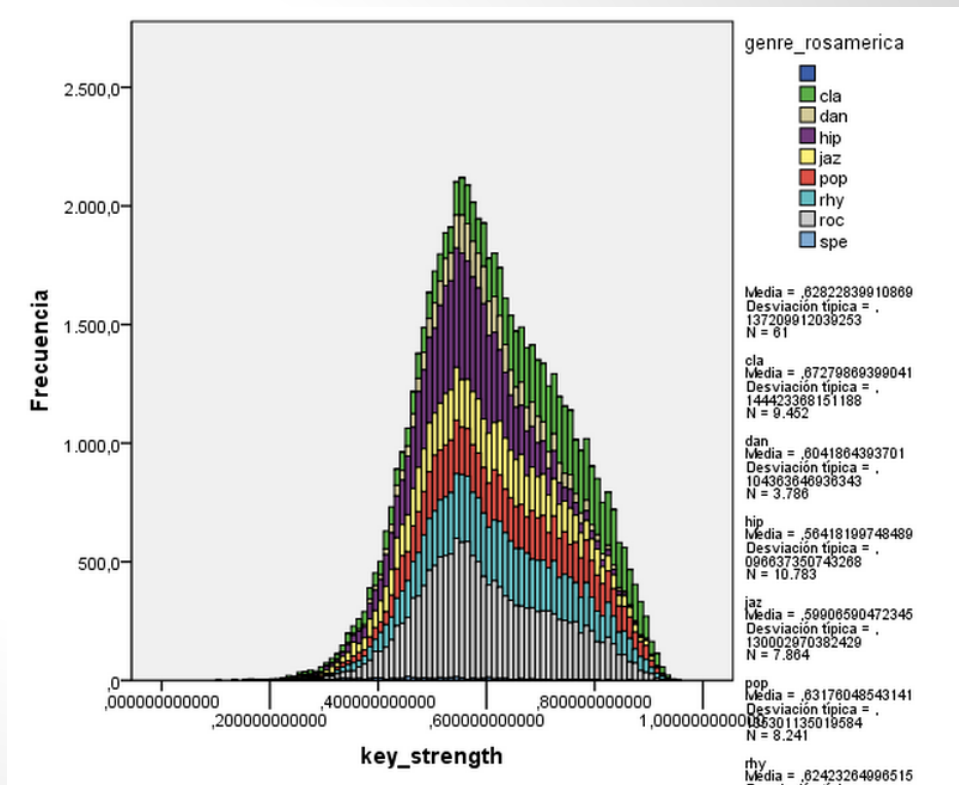
Frequencies vs genre

Frequencies present in various genres.

Higher frequencies in classical.
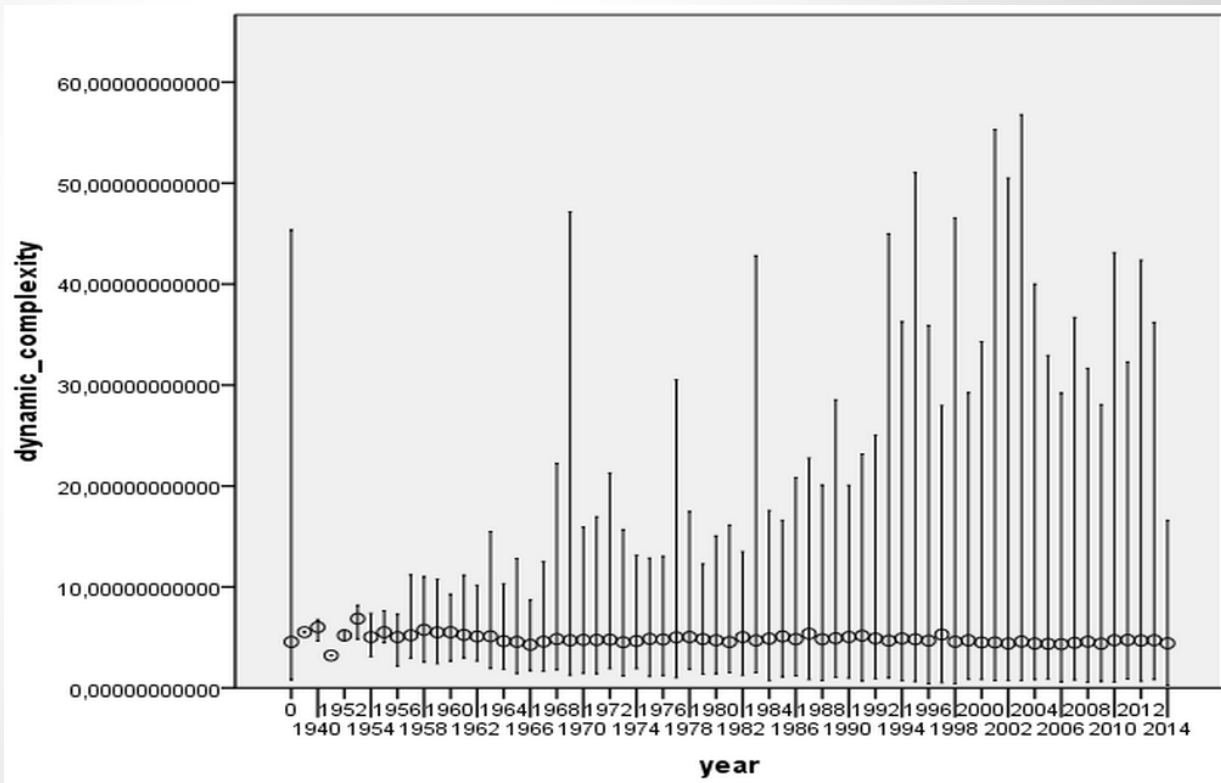
Lower frequencies in rock.

Pop is in the middle.

Dynamic complexity

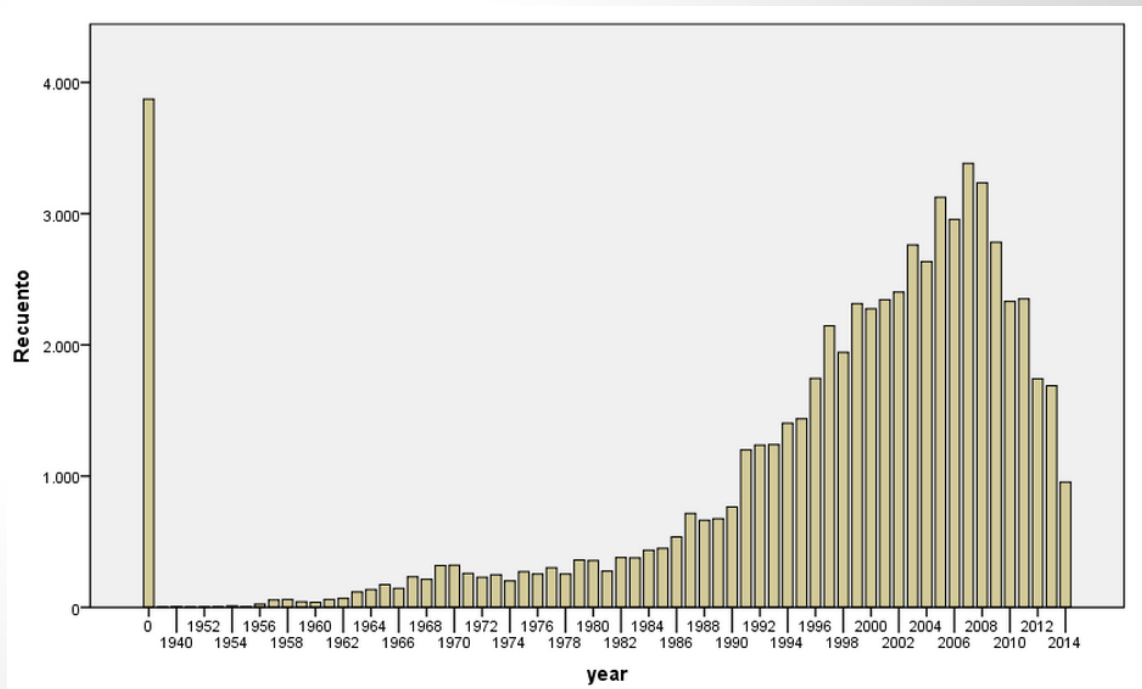We're seeing a greater range of dynamic complexity over the years.

Year distribution

Clearly the music in AcousticBrainz is mostly from the last 30 years.

Is this a bias of our community or that there is much more music in the last 30 years?
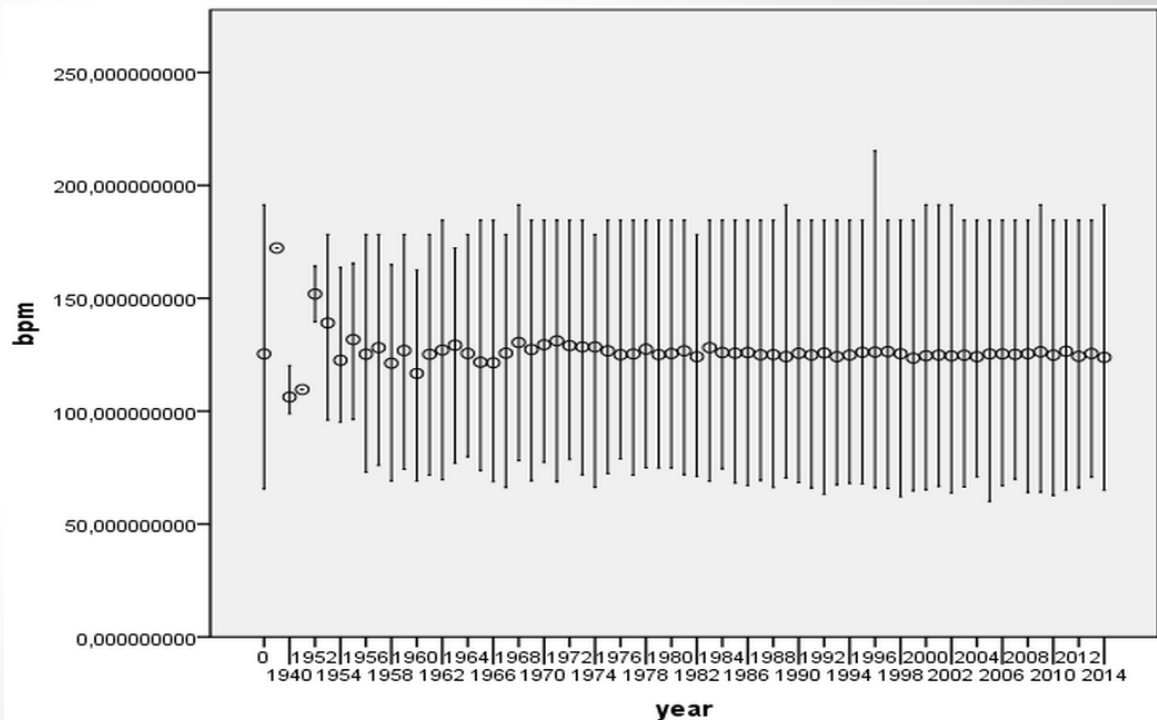
Probably both. Needs more data/analysis.
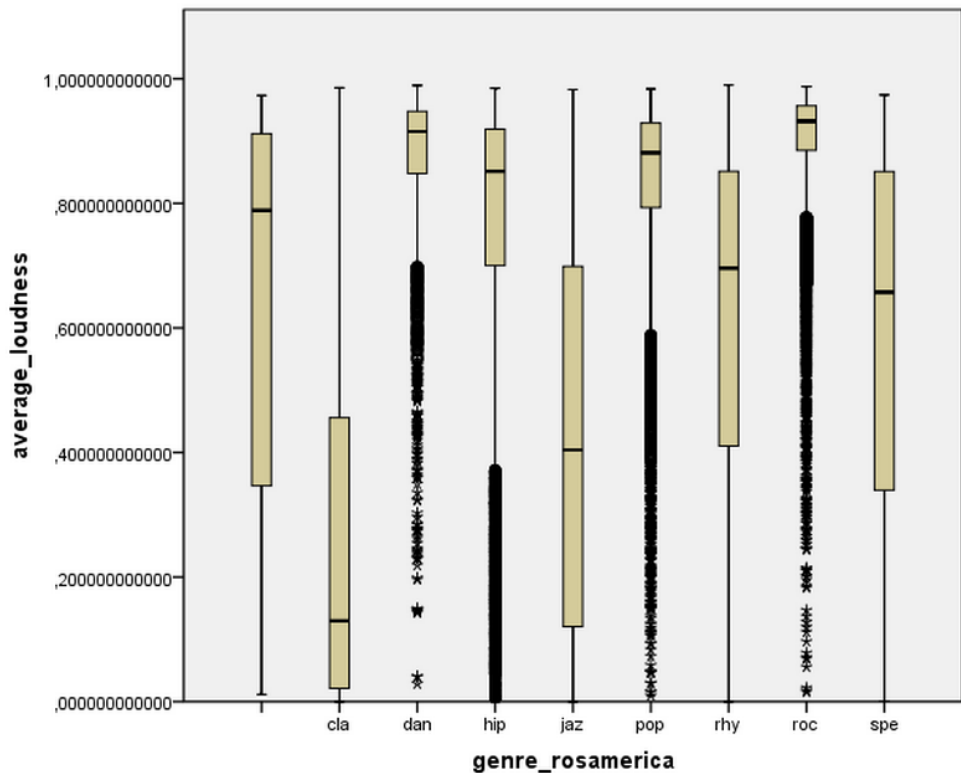
Is music getting faster?

No.

(At least we're not seeing any signs of it yet.)

Loudness vs genre

Classical & Jazz is quiet.

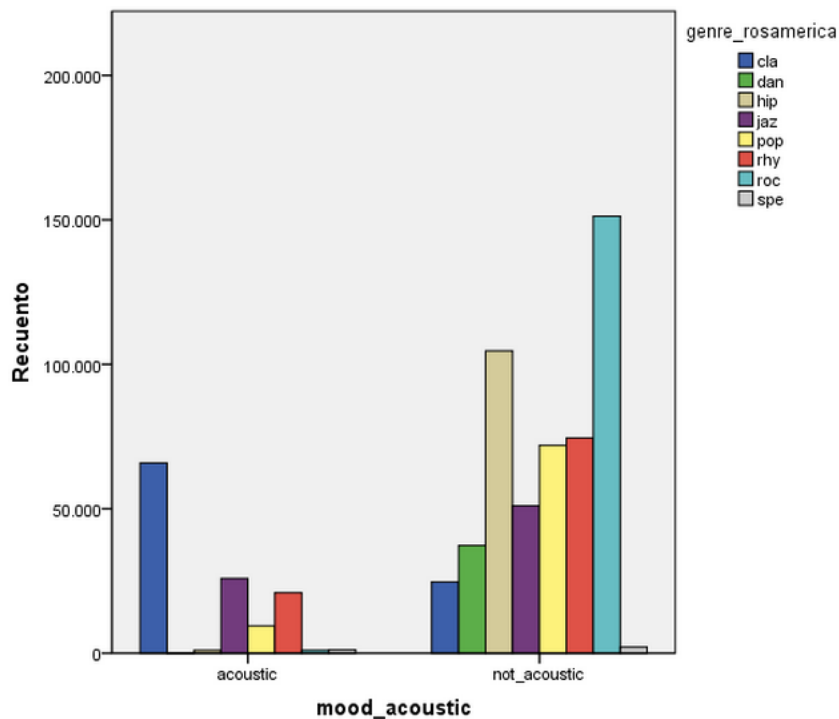Rock, hip-hop, dance and pop are loud.

Acoustic Moods

Acoustic moods are much more likely to be classical.

There isn't much acoustic rock.

more acoustic genres are classical, less acoustic rock.

Help!

To make AcousticBrainz work,

we need your help.

Please:

1. Tag your music with Picard
2. Run AcousticBrainz on your collection

Questions?

Follow the project/me on Twitter:

http://acousticbrainz.org

@AcousticBrainz

@MayhemBCN

(mayhem in barcelona)