



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

Semantic Web Technologies in the Music Domain

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EXERCISE



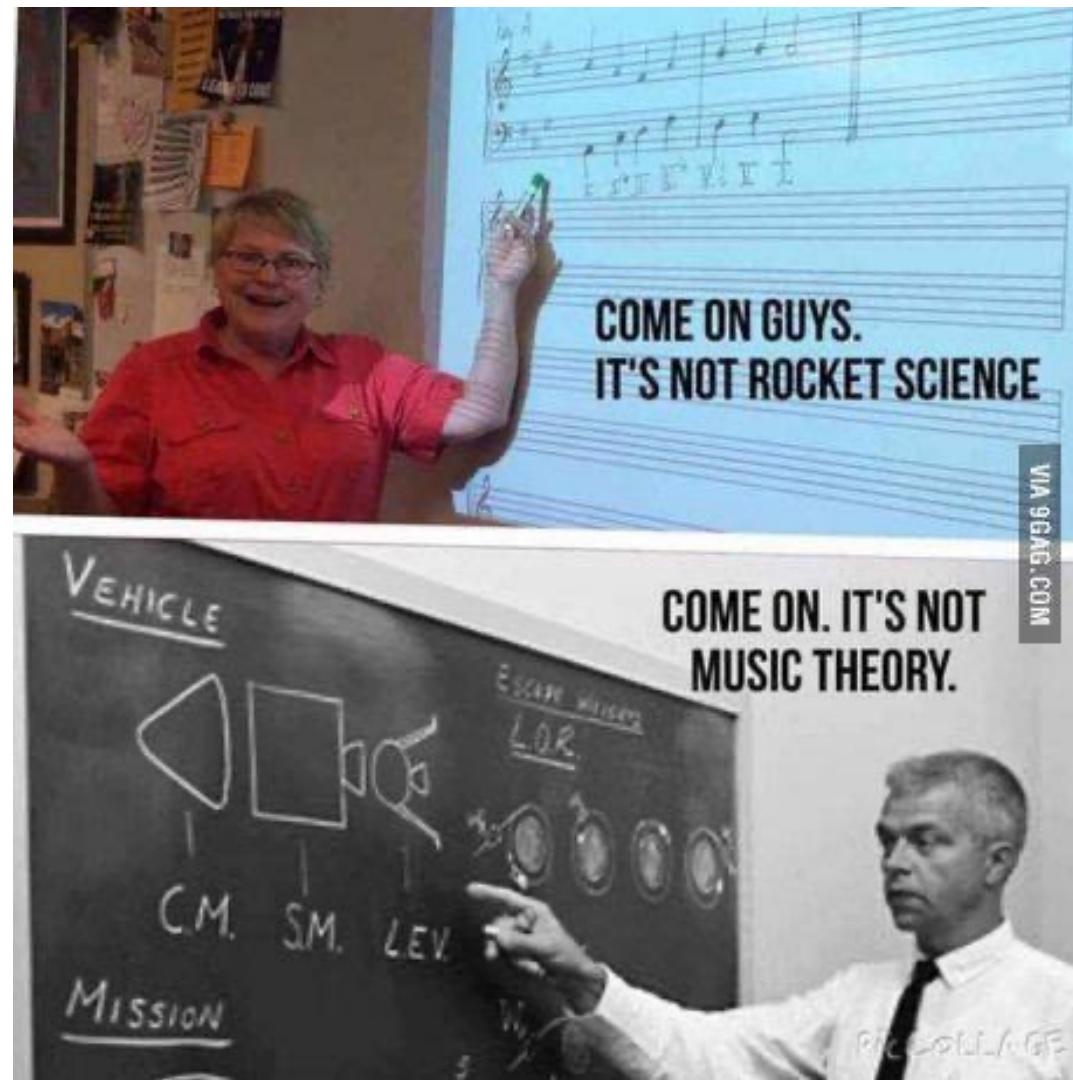
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01

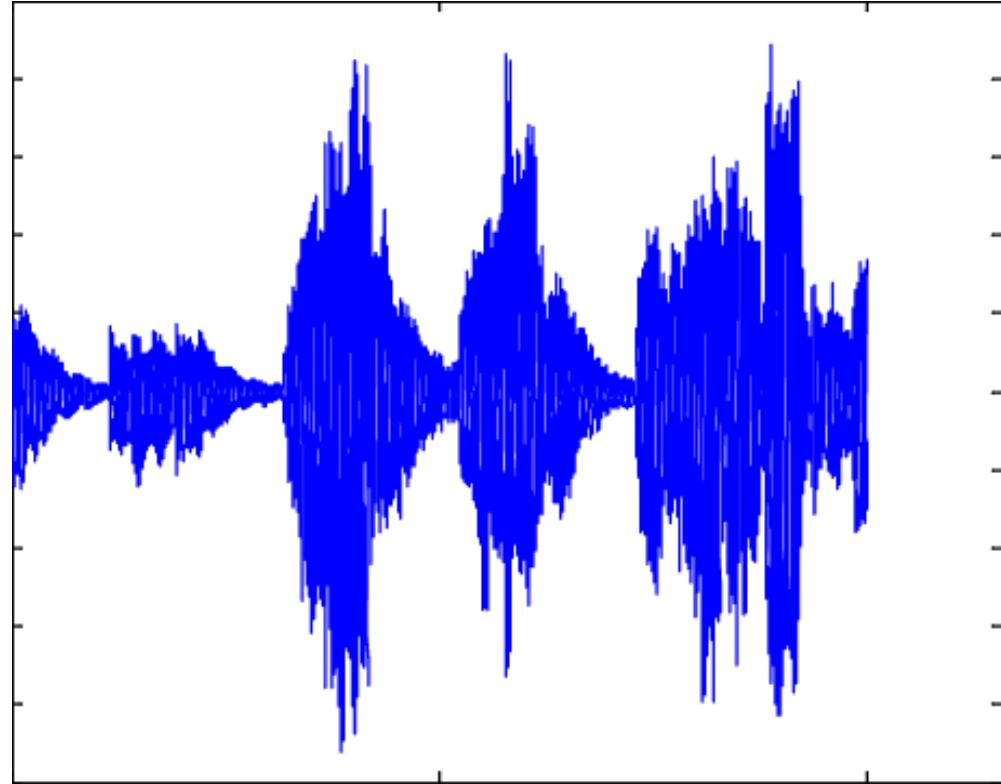
MUSICAL BACKGROUND



Music (theory) Background



Representing Music



Audio Signal

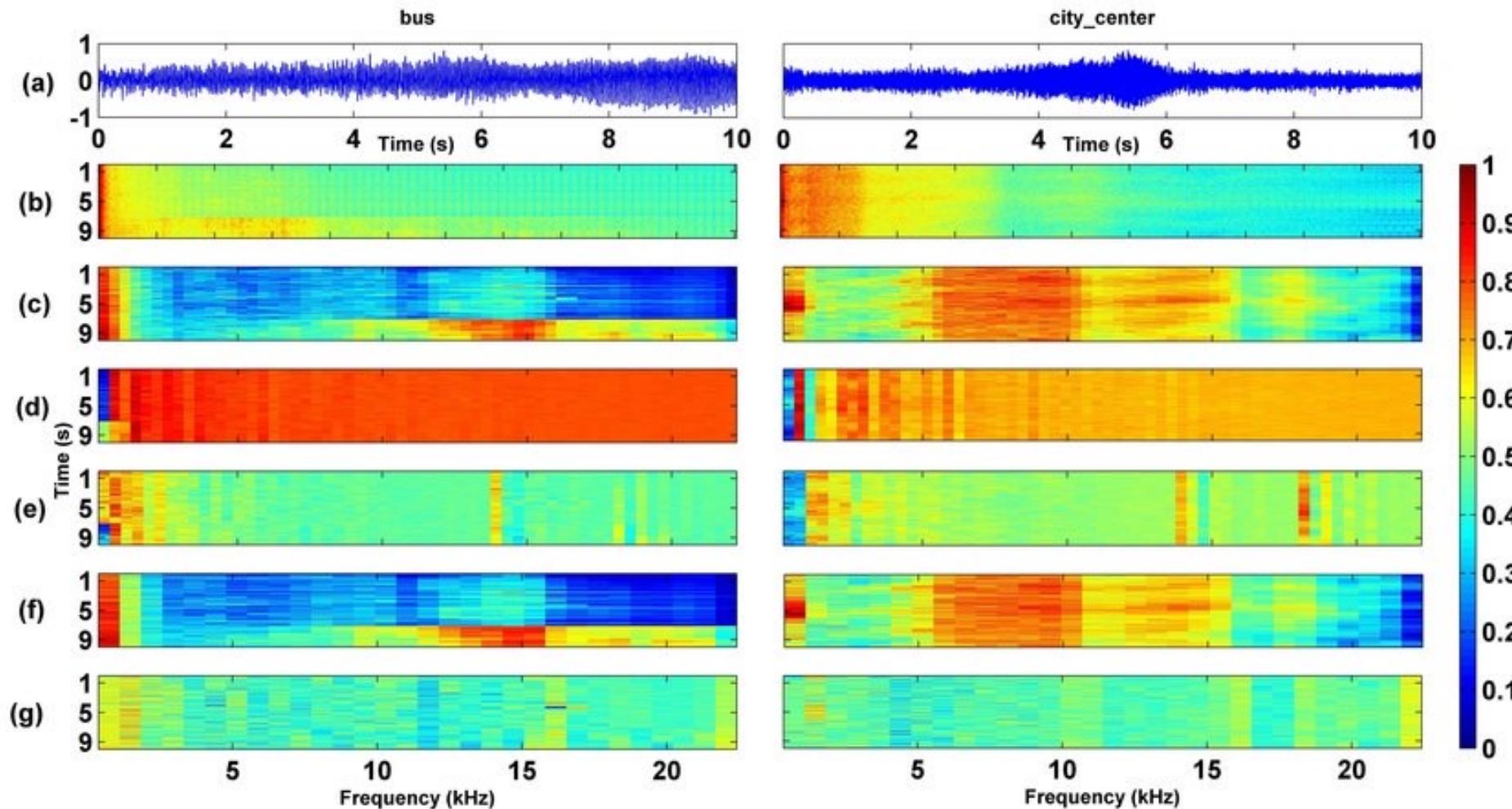


Symbolic Representation



Audio Signal

- Low structural generality
- High expressive completeness



Symbolic Representations

- High structural generality
- Low expressive completeness (e.g. timbre information usually overlooked)

```
<note>
  <pitch>
    <step>E</step>
    <alter>-1</alter>
    <octave>4</octave>
  </pitch>
  <duration>2</duration>
  <type>half</type>
</note>
```



Figure 1.15 from [Müller, FMP, Springer 2015]

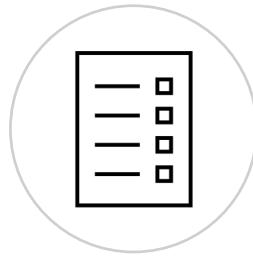


Music Similarity

Music similarity is defined as the ability to measure the similarity between music tracks



Central task in
**Music Information
Retrieval**



Central in **many fields**:
- Classification
- Recommendation
- Search



Crucial for
Musicology



Music Similarity

Music similarity can be approached from two different perspectives:



Context-based Similarity

Non-musical data:

- Metadata
- Song popularity
- Listener's preferences



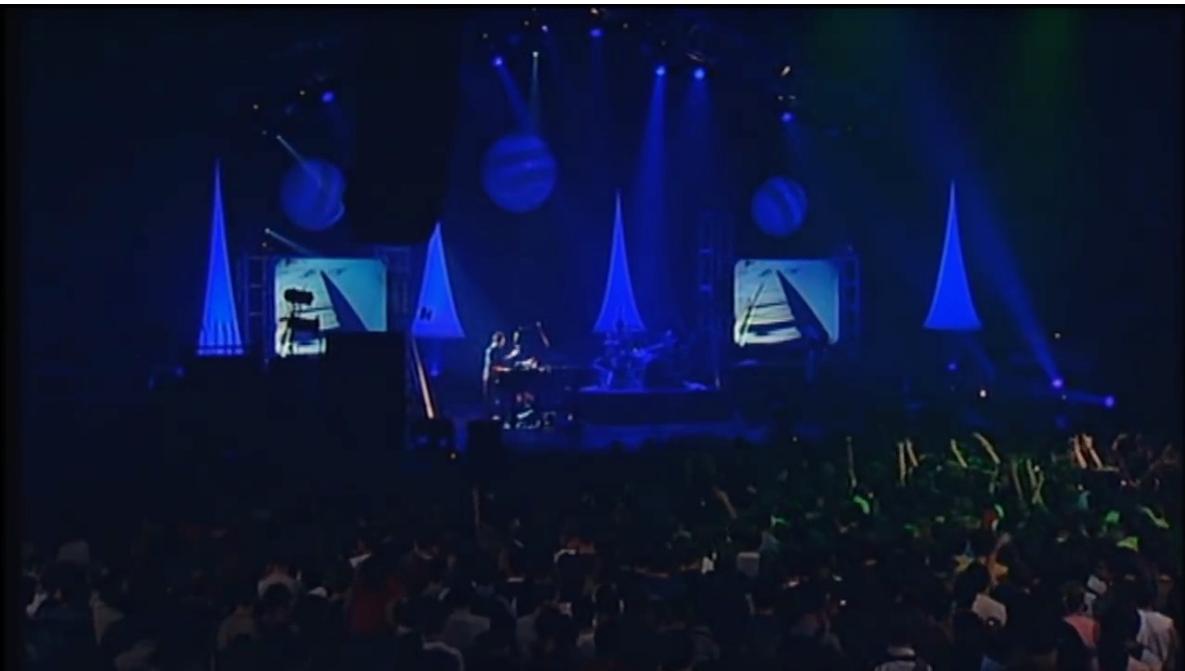
Content-based Similarity

Musical data

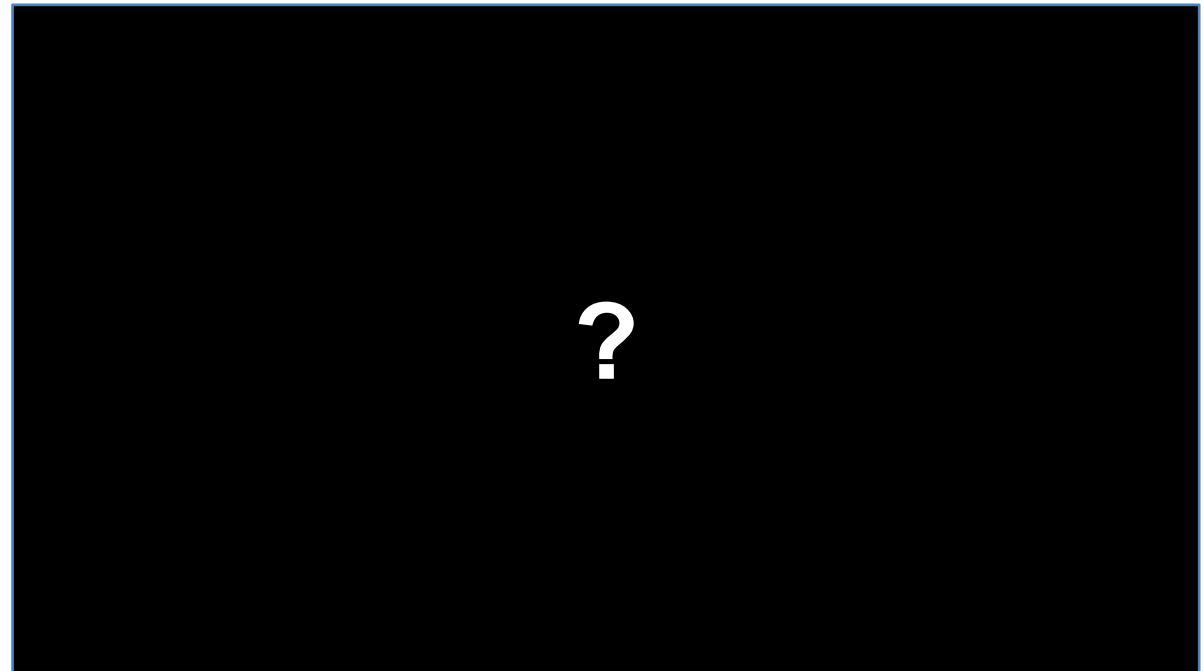


Muse - Space Dementia

Can you hear any **similarity** between the two compositions?



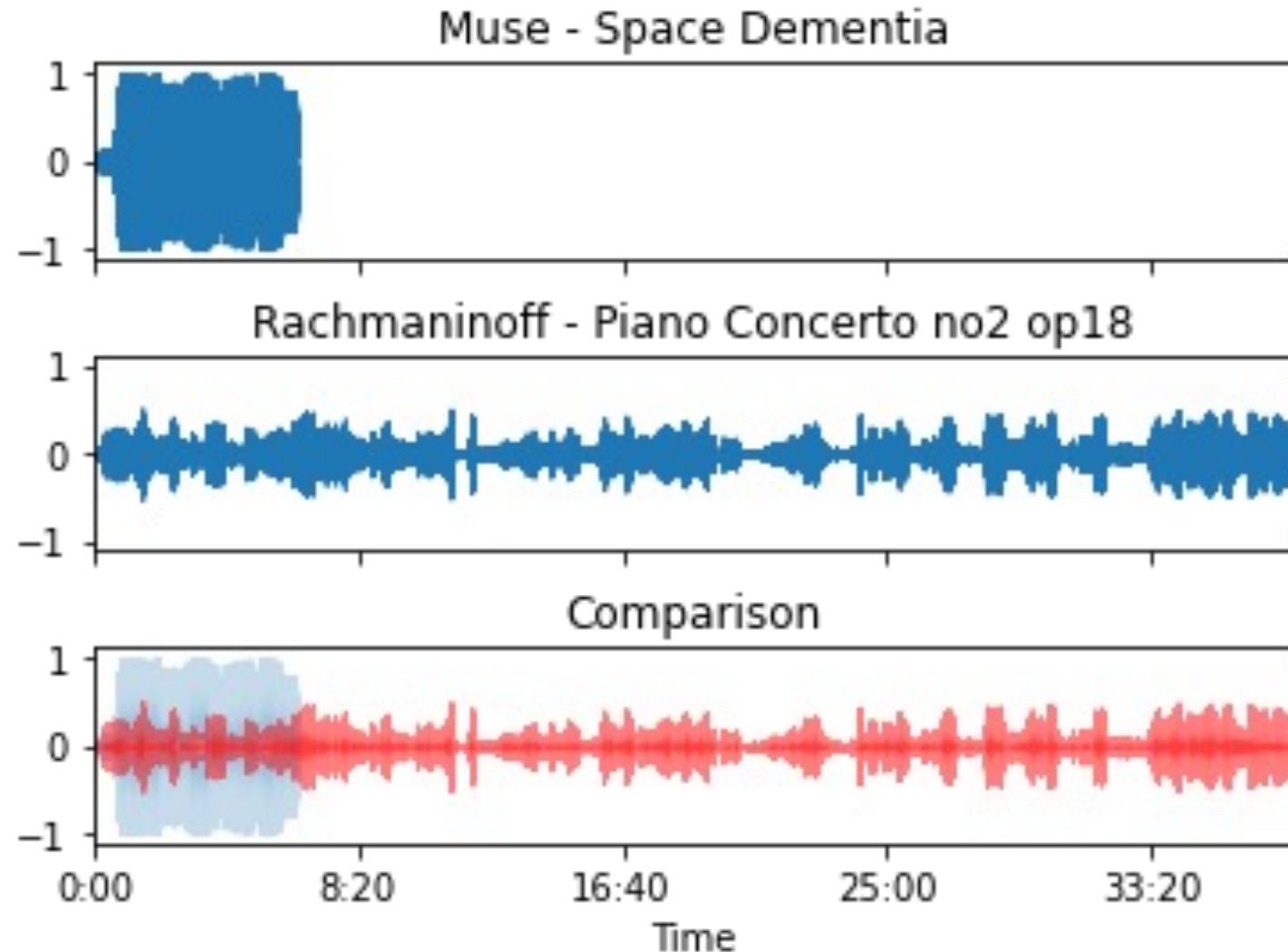
Muse – *Space Dementia* (2001)



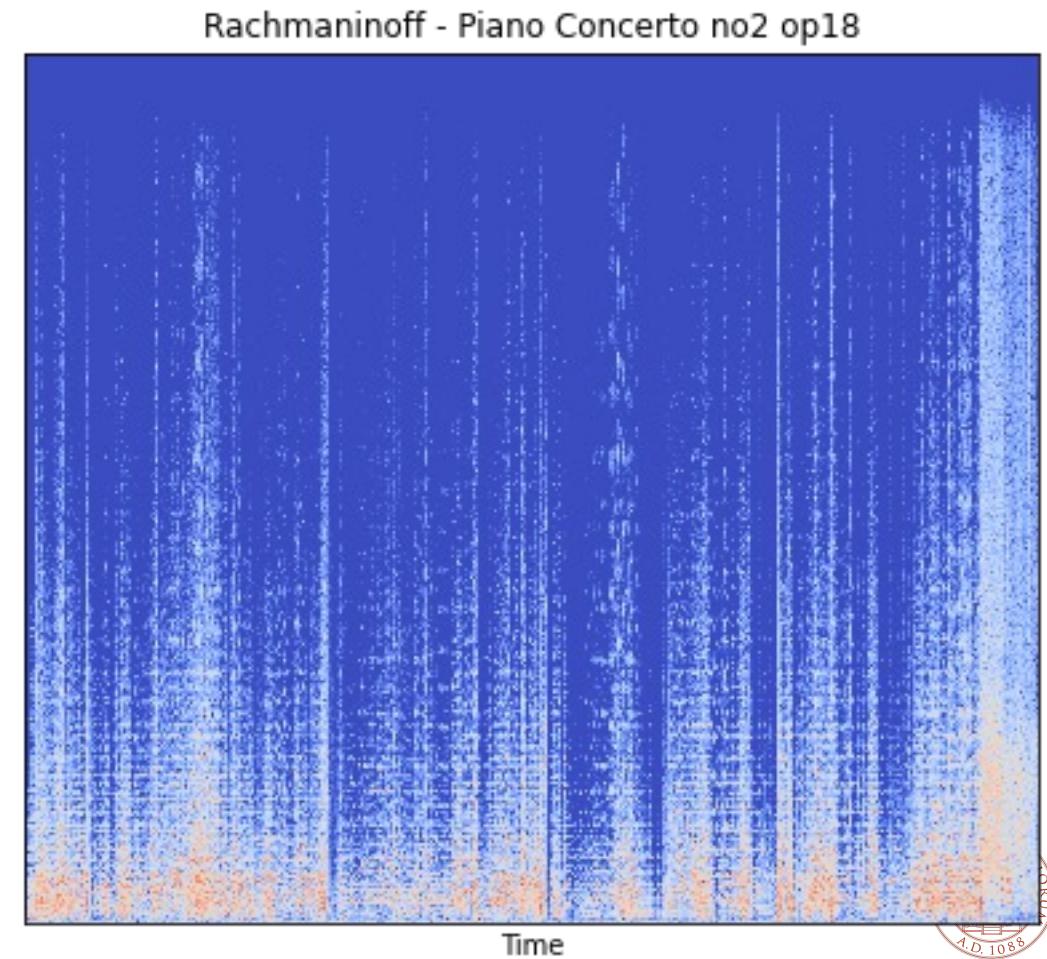
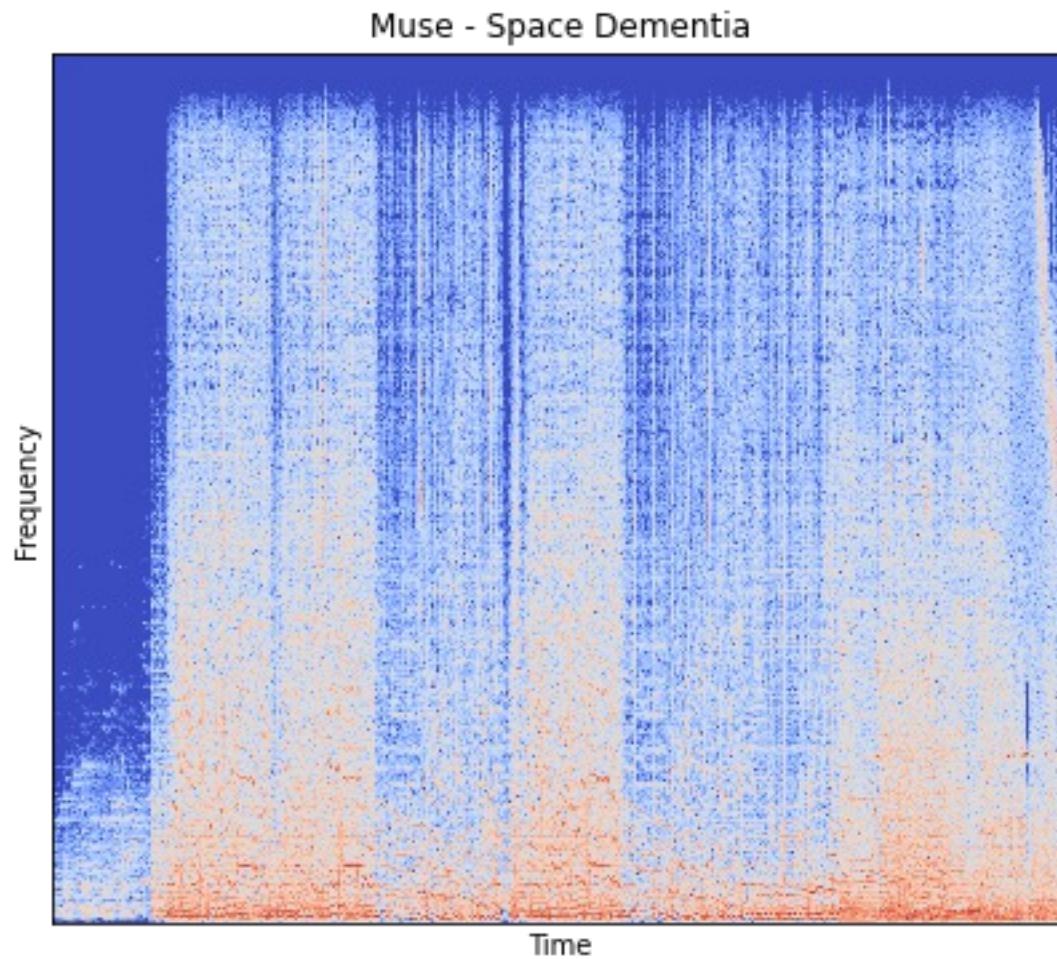
Rachmaninoff – *Piano Concerto no. 2* (1901)



Audio signal analysis is not enough



Audio signal analysis is not enough (2)



Symbolic similarity

a tempo con passione

Em(add9)

Rachmaninoff – *Piano Concerto no. 2* (1901)

- Same pattern
- Different key
- Different tempo

f

L.H.

8^{vib}

8^{vib}

8^{vib}

8^{vib} sim.

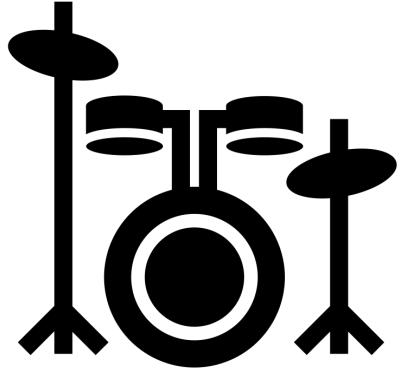
Muse – *Space Dementia* (2001)



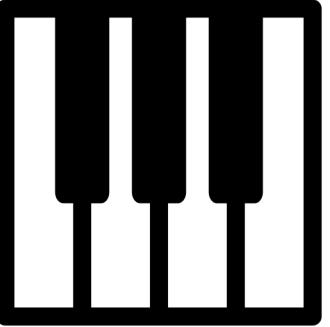
What is a music composition?



A musical composition is composed by three main elements:



Rhythm



Harmony



Melody



Jean-Benjamin de La Borde

Composition consists in two things only.
The first is [...] what the Ancients called melody.
The second is [...] what we call **harmony** and it
alone merits the name of composition.

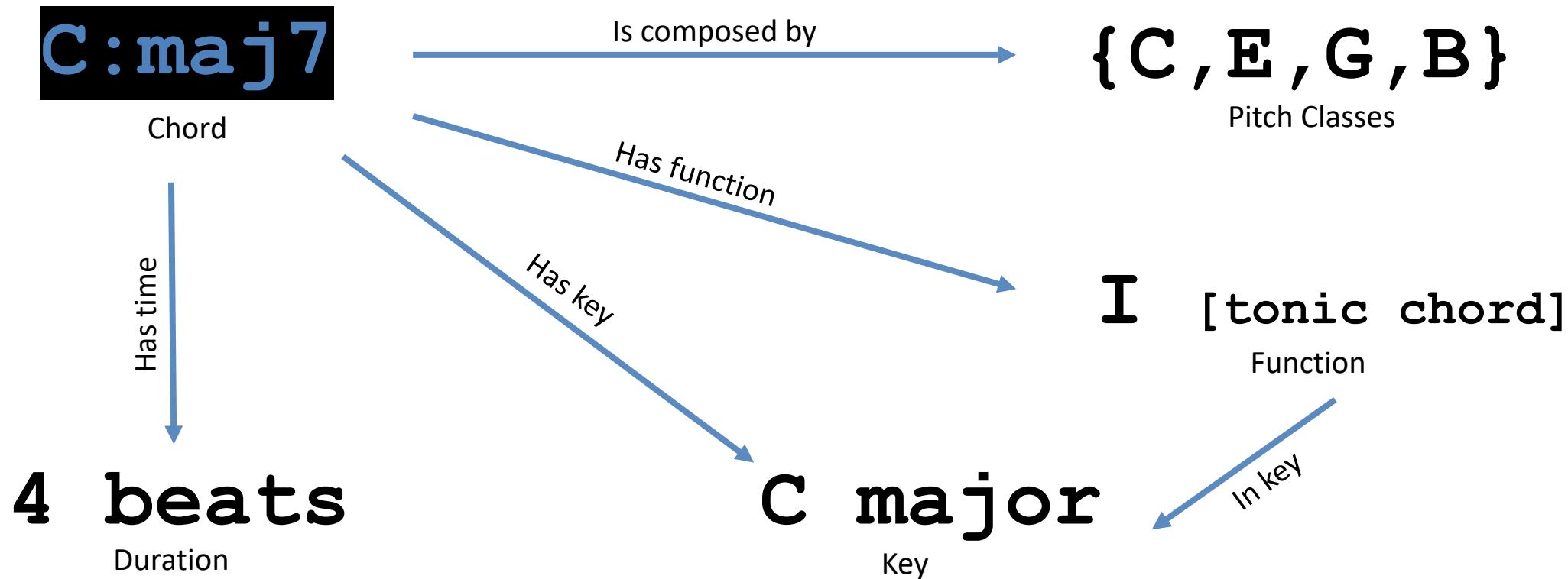
1780* ✓



What is harmony?

In music, harmony is the process by which individual sounds are joined or composed into whole units or compositions.

Harmony is usually represented through chords.



Today's topics

Today we are going to explore some ideas on how to use **Semantic Web Technologies** can be used for:

1. **Representing musical data** (harmonic data, melodic data, annotations, metadata, etc.)
2. Describing music **similarity**
3. Enhancing **machine creativity**.



02

MUSIC ONTOLOGIES



Overview of existing Music Ontologies

METADATA

Music Ontology

DOREMUS

MUSO Ontology

Performed Music
Ontology

OnVIE Ontology

MUSIC THEORY

Music Theory
Ontology

Temperament
Ontology

Tonality
Ontology

Chord Ontology

FunctionalHarmo
ny Ontology

MUSIC NOTATION

Music Score
Ontology

MIDI-LD

MusicOWL

MusicXML
Ontology

Charm Ontology

AUDIO SIGNAL

Audio Features
Ontology

Studio Ontology

Audio Effects
Ontology

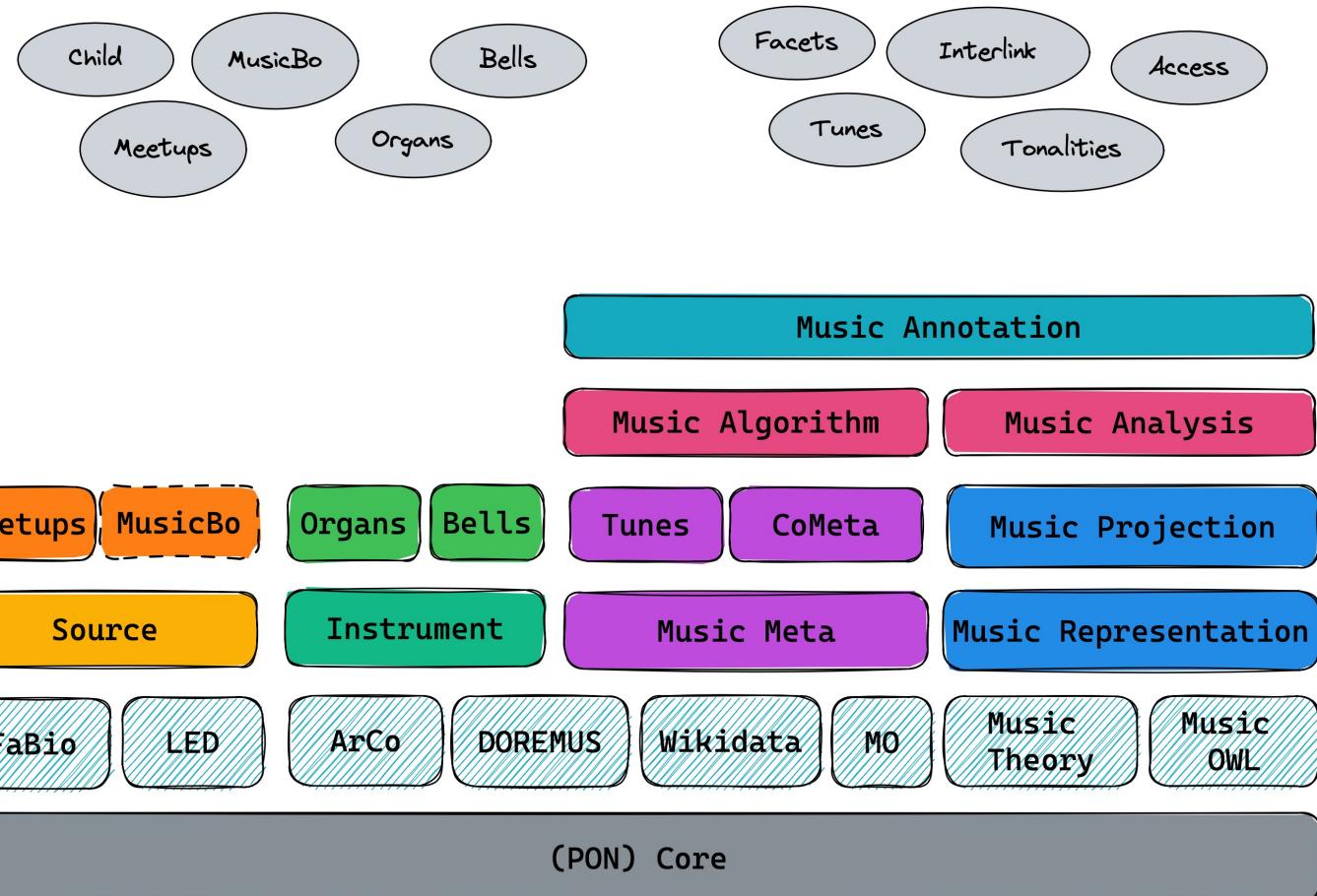
CALMA
Ontology

Smart Instrument
Ontology



The Polifonia Ontology Network (PON)

PON is a network of ontologies that can be used for describing heterogenous information in the **music domain**



03

CASE STUDIES



Case Studies

I will be introducing two different (yet related) projects which show an **interaction between music and the Semantic Web**:



ChoCo: The Chord Corpus



Harmory: The Harmonic Memory



Terminology (in this presentation)



Chord annotation: the output of a human expert (or a computational method) identifying chords in a piece.
(synonyms here: a sequence of chords / a chord progression)

Chord observation / occurrence: the atomic elements of a chord annotation – the individual chords.

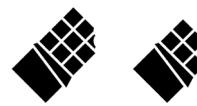
Tonality: given by the key (e.g. C) and the scale (e.g. “maj”).



FROM



18 datasets



14 formats



9 notations



TO



1 dataset

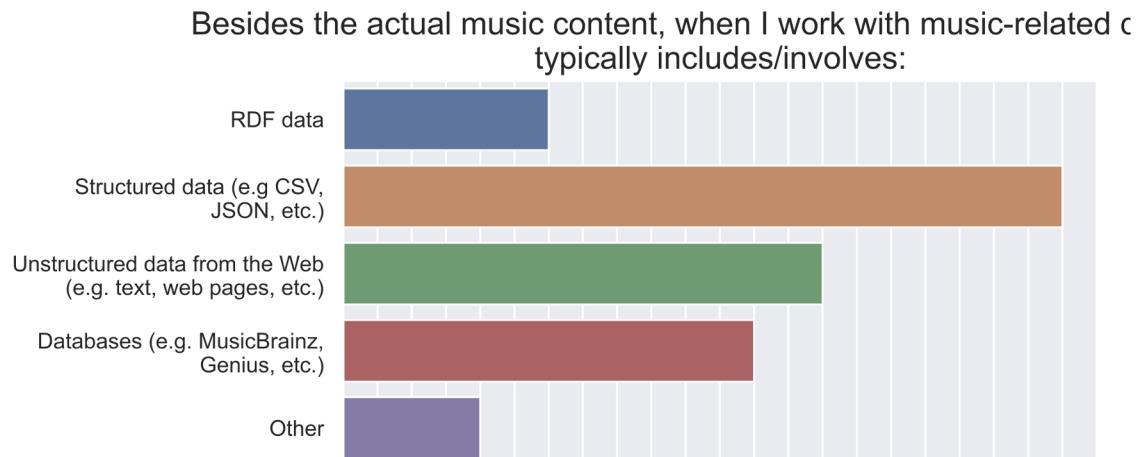
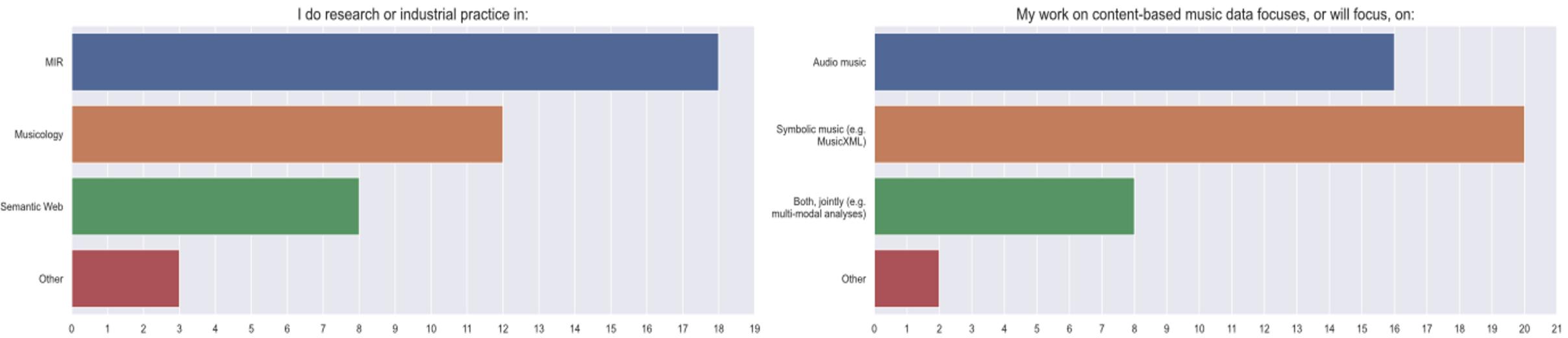


2 outputs



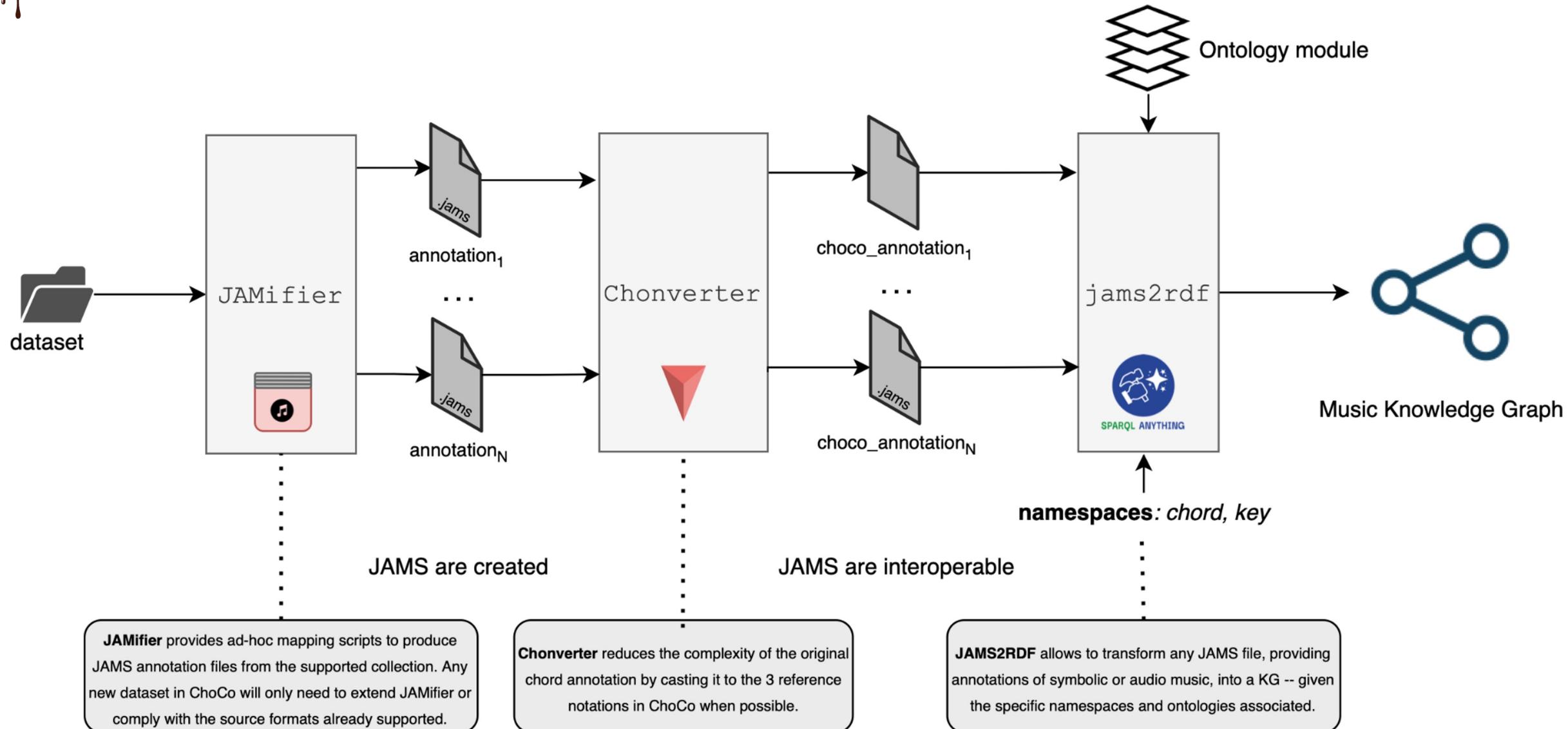
2 notations

The need for ChoCo





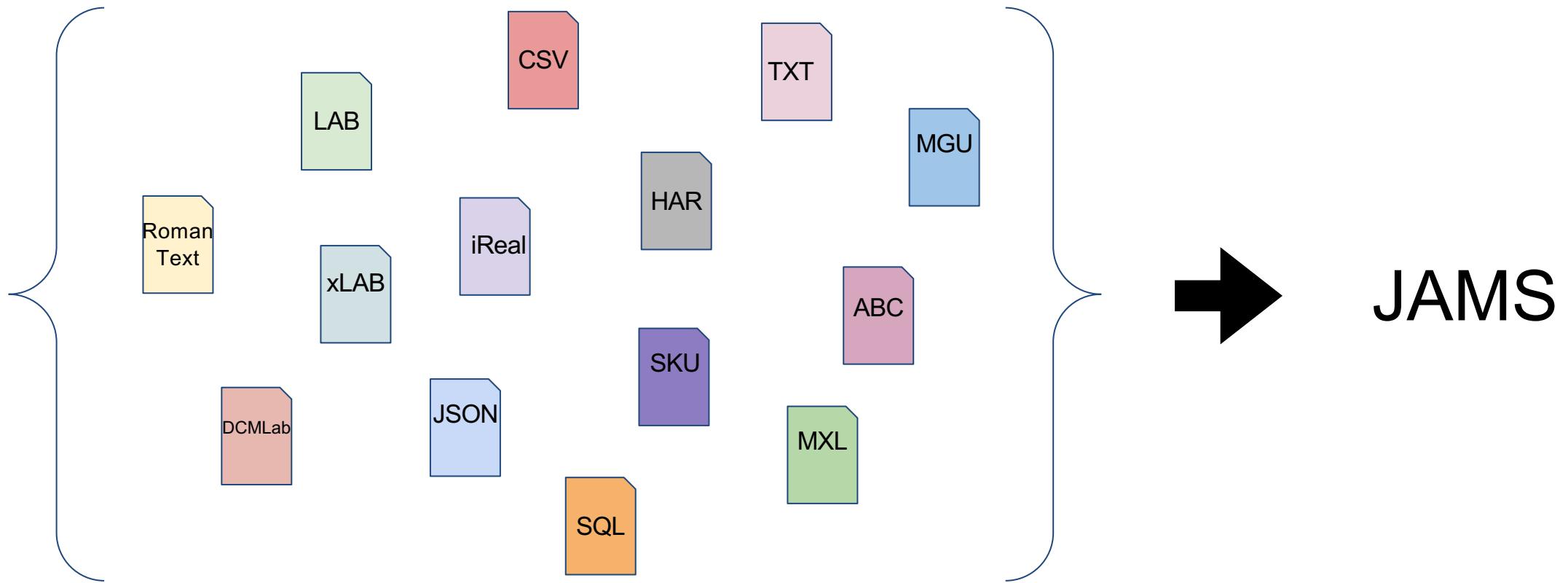
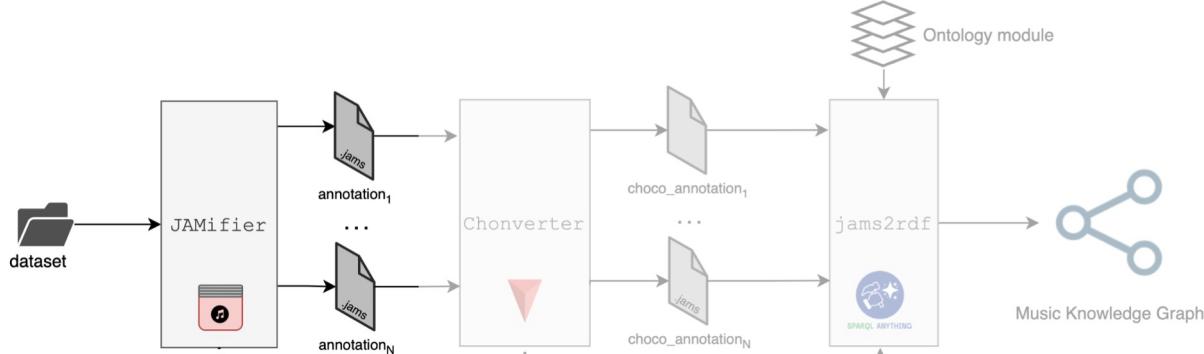
Data transformation workflow





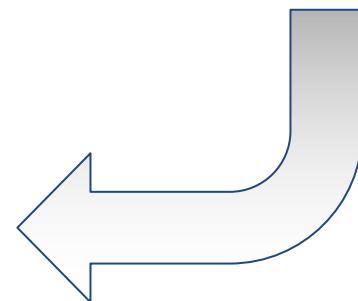
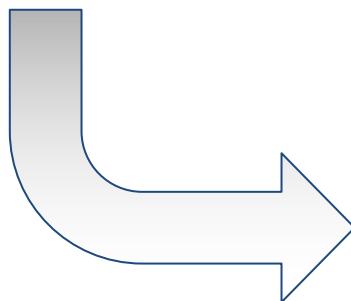
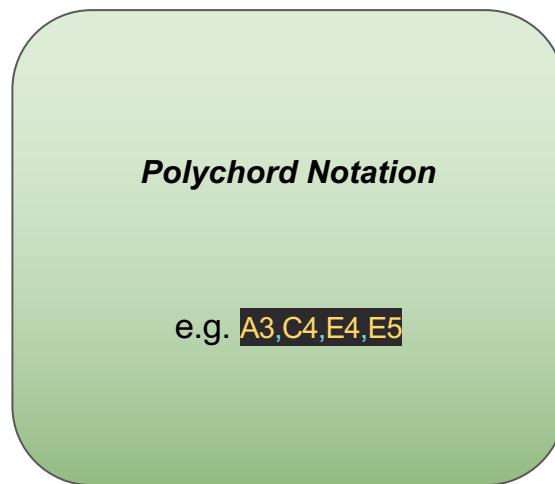
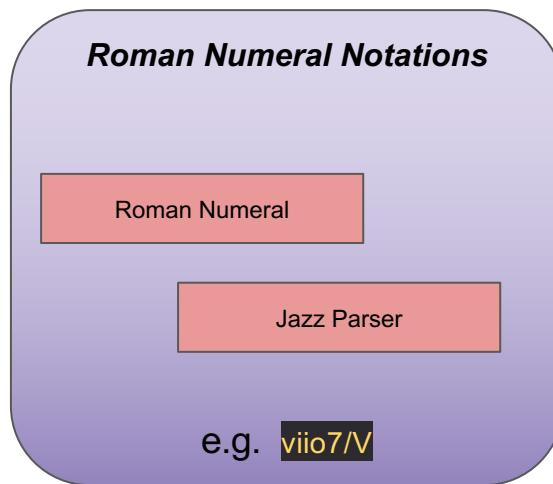
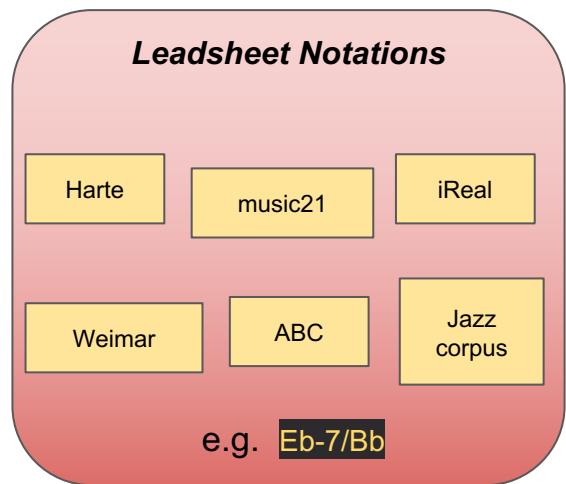
1. Jamifier

Challenge 1: little or no use of **annotation standards**



2. Chonverter

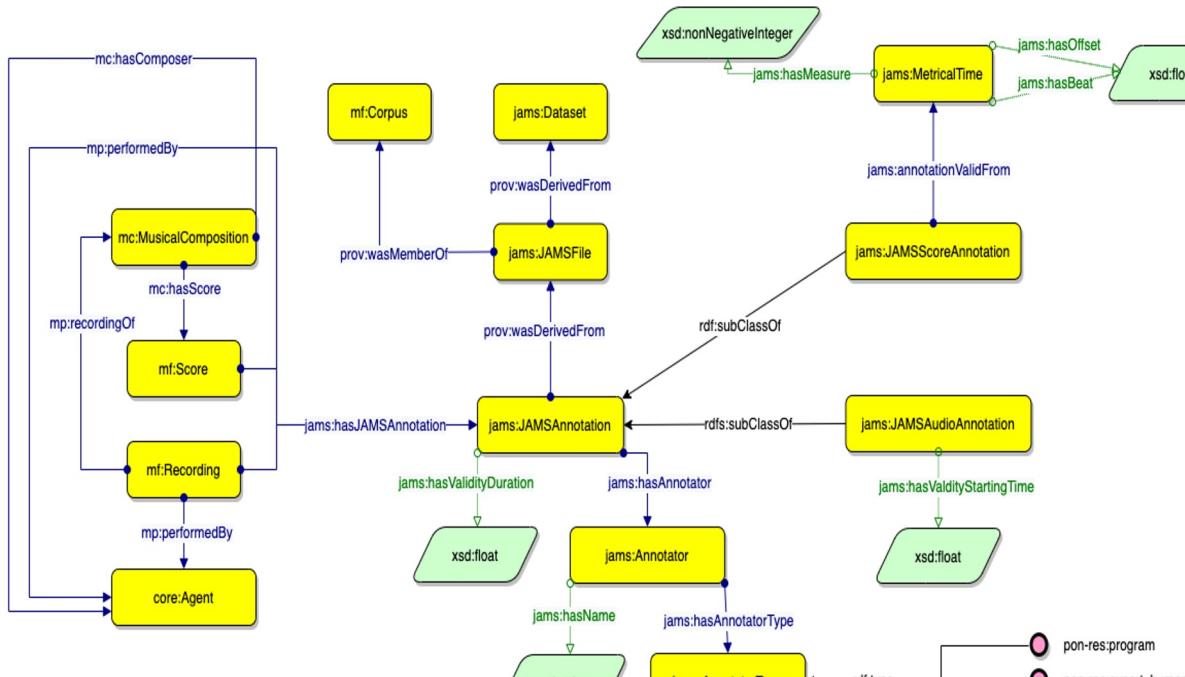
Challenge 2: too many **chord notations**



Harte Notation

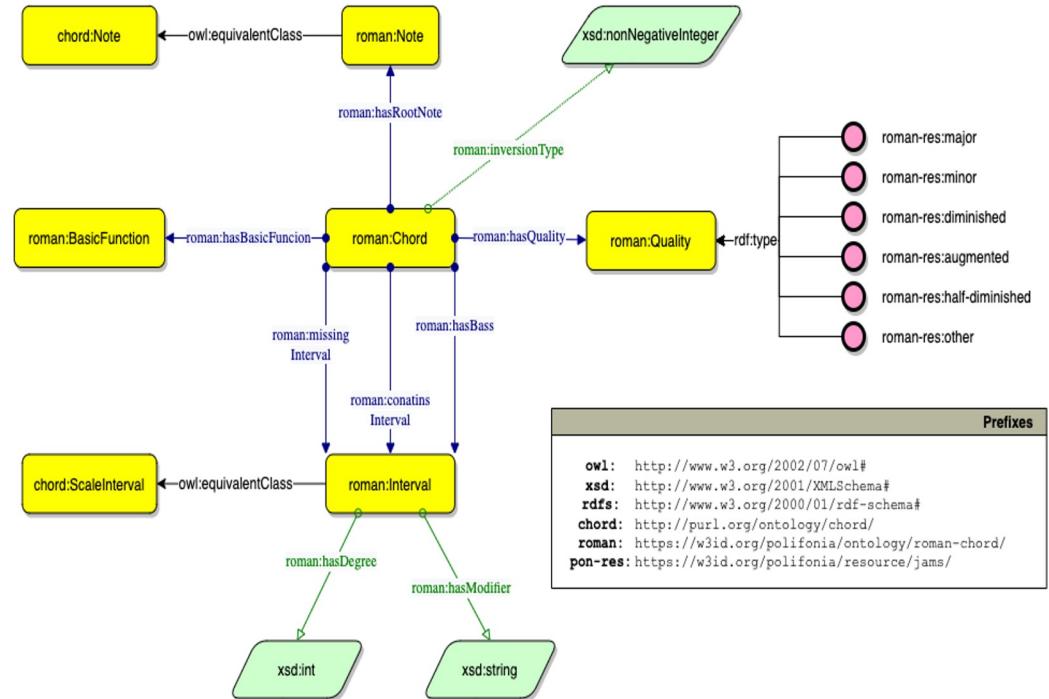
3. KG Generation

Challenge 3: making ChoCo data available and interoperable



Prefixes	
core:	https://w3id.org/polifonia/ontology/core/
jams:	https://w3id.org/polifonia/ontology/jams/
mc:	https://w3id.org/polifonia/ontology/musical-composition/
mp:	https://w3id.org/polifonia/ontology/musical-performance/
mf:	https://w3id.org/polifonia/ontology/musical-feature/
chord:	http://purl.org/ontology/chord/
roman:	https://w3id.org/polifonia/ontology/roman-chord/

Excerpt of the JAMS Ontology



Excerpt of the Roman Chord Ontology



3. KG Generation

```

CONSTRUCT {
    # the file from which the data is extracted
    ?jams_file_uri a jams:JAMSFile ;
        jams:jamsVersion ?jams_version ;
        jams:release ?release ;
        prov:wasDerivedFrom ?corpus ;
        prov:wasMemberOf <https://github.com/jonnybluesman/choco> .

    # COMPOSITION
    ?composition_uri a mc:MusicalComposition ;
        rdfs:label ?title ;
        mc:title ?title ;
        prov:wasDerivedFrom ?jams_file_uri ;
        # only if the sandbox.type = score
        ?composer_type_relation ?composer_uri .

    # ARTIST COMPOSER
    ?composer_uri ?composer_is_type core:Agent ;
        rdfs:label ?composer .

    # ARTIST PERFORMER
    ?performer_uri ?performer_is_type core:Agent ;
        rdfs:label ?performer .

    # RECORDING
    ?recording_uri ?recording_is_type mp:Recording ;
        ?recording_title ?title ;
        ?recording_label ?title ;
        ?is_recording_of ?composition_uri ;
        ?recording_duration ?duration ;
        ?recording_contained_in ?release ;
        # only if the sandbox.type = audio
}

```

```

WHERE {
    SERVICE <x-sparql-anything:> {

        fx:properties fx:location ?_filepath ;
            fx:media-type "application/json" ;
            fx:blank-nodes true .

        #####
        # SANDBOX
        #####
        ?x xyz:sandbox ?sandbox .
        ?sandbox xyz:type ?object_type .
        OPTIONAL {?sandbox xyz:performers ?performer_list .
        ?performer_list fx:anySlot ?performer .}
        OPTIONAL {?sandbox xyz:composers ?composer_list .
        ?composer_list fx:anySlot ?composer .}

        OPTIONAL {
            FILTER (?composer != "")
            BIND (mc:hasComposer AS ?composer_type_relation)
            BIND (rdf:type AS ?composer_is_type)
            BIND (rdf:type AS ?score_type)
            BIND (mc:isScoreOf AS ?is_score_of)
            BIND (rdfs:label AS ?score_label)
            BIND (mf:duration AS ?score_duration)
        }
        OPTIONAL {
            FILTER (?performer != "")
            BIND (mp:performedBy AS ?performer_type_relation)
            BIND (rdf:type AS ?performer_is_type)
        }
    }
}

```

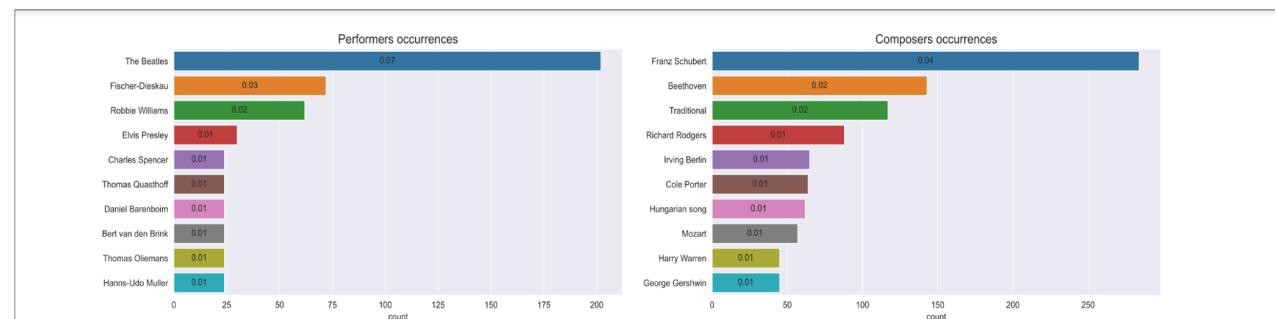
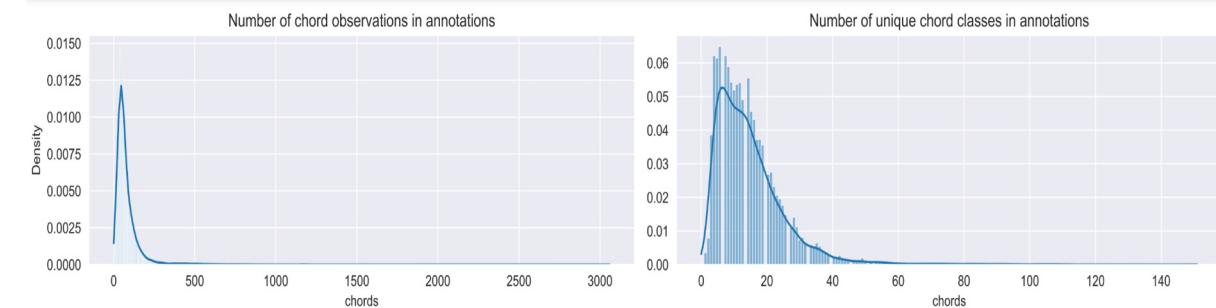
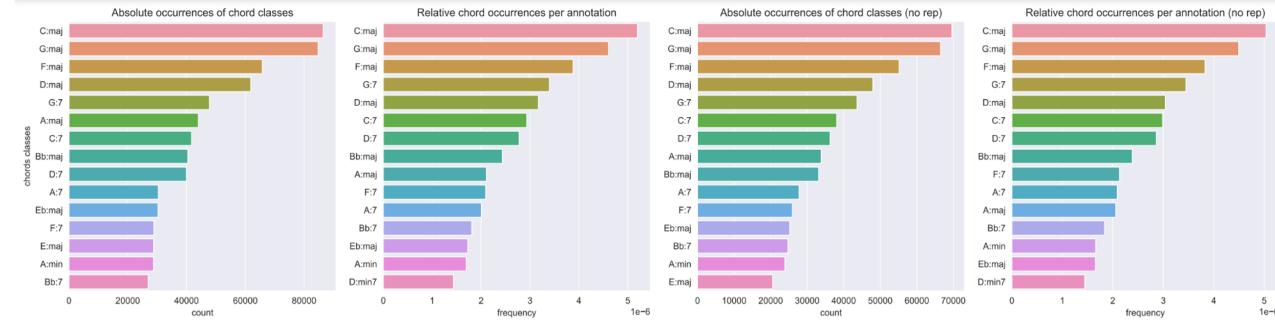
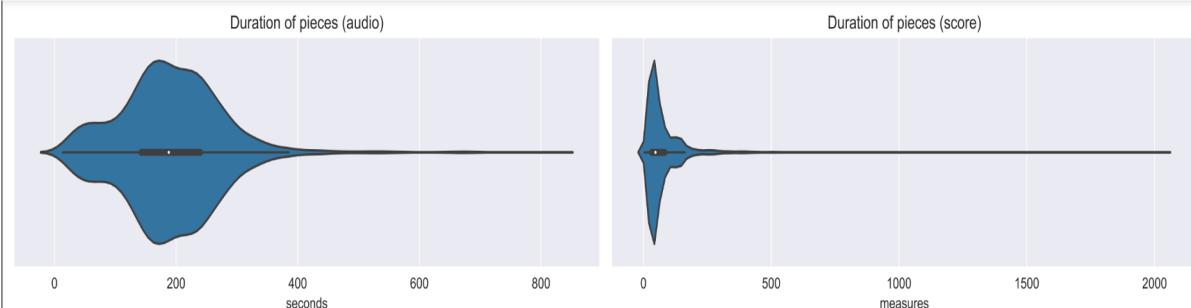




Partition	Type	Notation	Original format	Annotations	Genres	Ref
Isophonics	A	Harte	JAMS	300	pop, rock	19
JAAH	A	Harte	JSON	113	jazz	20
Schubert-Winterreise	A, S	Harte	csv	25 (S), 25*9 (A)	classical	21
Billboard	A	Harte	LAB, txt	890 (740)	pop	22
Chordify	A	Harte	JAMS	50*4	pop	6
Robbie Williams	A	Harte	LAB, txt	61	pop	23
The Real Book	S	Harte	LAB	2486	jazz	24
Uspop 2002	A	Harte	LAB	195	pop	25
RWC-Pop	A	Harte	LAB	100	pop	26
Weimar Jazz Database	S	Leadsheet	SQL	456	jazz	27
Wikifonia	S	Leadsheet	mxl	6500+	various	-
iReal Pro	S	Leadsheet	iReal	2000+	various	-
Band-in-a-Box	S	Leadsheet	mgu, sku	5000+	various	28
When in Rome	S	Roman	RomanText	450	classical	29
Rock Corpus	S	Roman	har	200	rock	30
Mozart Piano Sonata	S	Roman	DCMLab	54 (18)	classical	4
Jazz Corpus	S	Hybrid	txt	76	jazz	31
Nottingham	S	ABC	ABC	1000+	folk	32

20K+ [JAMS](#) files
 with 42K+ different [annotations](#)
 ~21K [chord](#) annotations (Harte)
 20K+ of [tonality](#) and modulations.
 554 structural annotations
 286 beat annotations
 711 unique external identifiers
 1,642,625 chord occurrences
 7,281 possible chord classes (Harte).

ChoCo





2.4K links to [MIDI-LD](#), ~2K to [LED](#)

Additional links open up new research directions

Relating [harmonic content](#) (chord changes, harmonic complexity, tension, etc.) to other musical [properties](#) that are inherently present in the music (melodic contour, expressive variations, instrumental changes, etc.), or that may have been elicited certain [emotions](#), [memories](#), and [feelings](#) to listeners.

Example of listening experience of the “**So What**” (J. Coltrane) in LED ([~/led/lexp/1431335026178](#))

«What do you mean by playing "without harmony"? Using a pedal tone, which Coltrane got into after a period of very dense harmonic playing. He would use one or two harmonic references throughout a song, as he did on "So What" [from Miles Davis's Kind of Blue, on Columbia]. It was basically D for sixteen bars, E flat for eight bars, and then back to D. Ultimately, he worked with only one harmonic reference point, and then in "Ascension" [from Best of John Coltrane: His Greatest Years, on Impulse] there was nothing harmonically.»

(Steve Kuhn in “The Great Jazz Pianists: Speaking of Their Lives and Music



MIDI Linked Data

MIDI Linked Data is the representation of symbolic music in [MIDI](#) format following the Web data publishing principles of [Linked Data](#). Join us and contribute to extending the MIDI Linked Data Cloud!



[Project Website](#) [About](#) [Support](#) [Open Data](#) [Contact](#)

[Create account](#) | [Forgot password?](#)


BROWSE

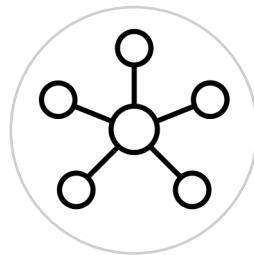
Welcome to The Listening Experience Database

This is an open and freely searchable database that brings together a mass of data about people's experiences of listening to music of all kinds, in any historical period and any culture.

There are currently [12157 listening experiences](#) in the database, with [178 more experiences](#) awaiting approval.

[Explore the database](#) [Find experiences in texts](#)

Harmony in a nutshell



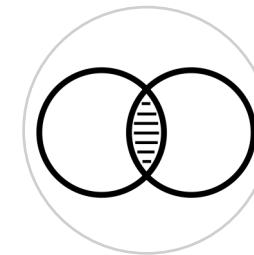
Harmony is a resource

Harmony is Knowledge Graph
(KG)



Harmony contains harmonic data

- Harmony contains:
1. Segmented harmonic patterns
 2. Similarity information



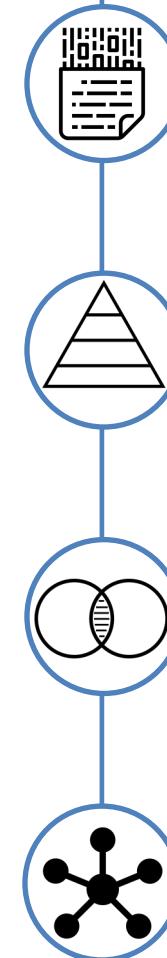
Harmony can be used for AI creativity

Harmony can be used a
trustworthy framework for
computational creativity



Harmory: the Harmonic Memory

The creation of the Harmonic Memory can be summarised in four main steps



Encoding chords in the **Tonal Pitch Space**

Novelty-based harmonic segmentation

Linking harmonic segments via similarity

Knowledge Graph creation

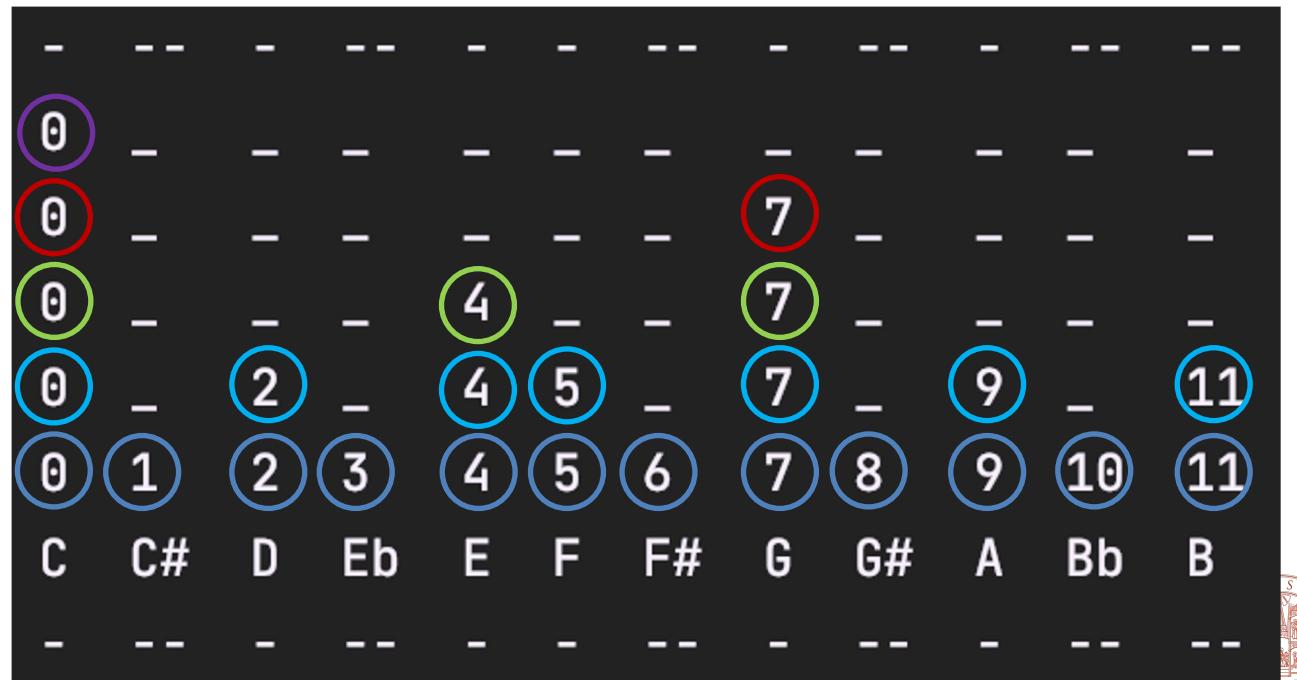


1. Encoding Chords in the Tonal Pitch Space (TPS)

The TPS provides a **scoring mechanism** that predicts the **proximity between two musical chords**. It is based on the *Generative Theory of Tonal Music* and it is musicologically grounded.

It is composed by **five levels**:

1. Root level →
2. Fifths level →
3. Triadic level →
4. Diatonic level →
5. Chromatic level →



Example of a C major chord levels of the TPS

1. Encoding Chords in the Tonal Pitch Space (TPS) (2)

The TPS distance between two chords (A and B) is calculated considering:

-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	4	-	-	-	-	-	-	-	-
0	-	-	-	4	-	-	7	-	-	-	11	
0	1	2	3	4	5	6	7	8	9	10	11	
0	1	2	3	4	5	6	7	8	9	10	11	
0	1	2	3	4	5	6	7	8	9	10	11	
C	C#	D	Eb	E	F	F#	G	G#	A	Bb	B	
-	-	-	-	-	-	-	-	-	-	-	-	-

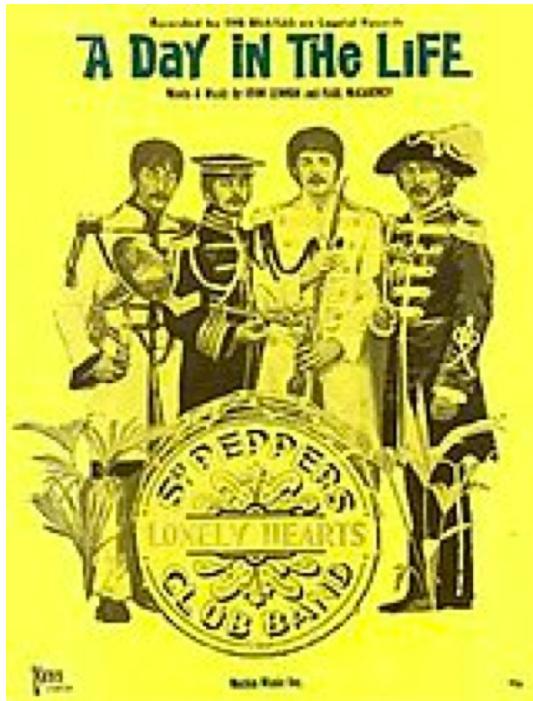
1. Number of **non-common pitch classes** divided by 2 in the levels (*i-iv*)
+
2. Minimum number of **Circle-of-Fifths rule** applications to shift between chord A and B



1. Encoding Chords in the Tonal Pitch Space (TPS) (3)

For a chord sequence, each chord is encoded as its distance to its local key.

For each comparison between two chords, the TPS returns a value in [0, 13].



Chord sequence (c): [G, B:min, E:min7, ...]

Tonal keys of c (k): [(G, major), (G, major), (G, major), ...]

Onsets (t): [1, 3, 5, ...]

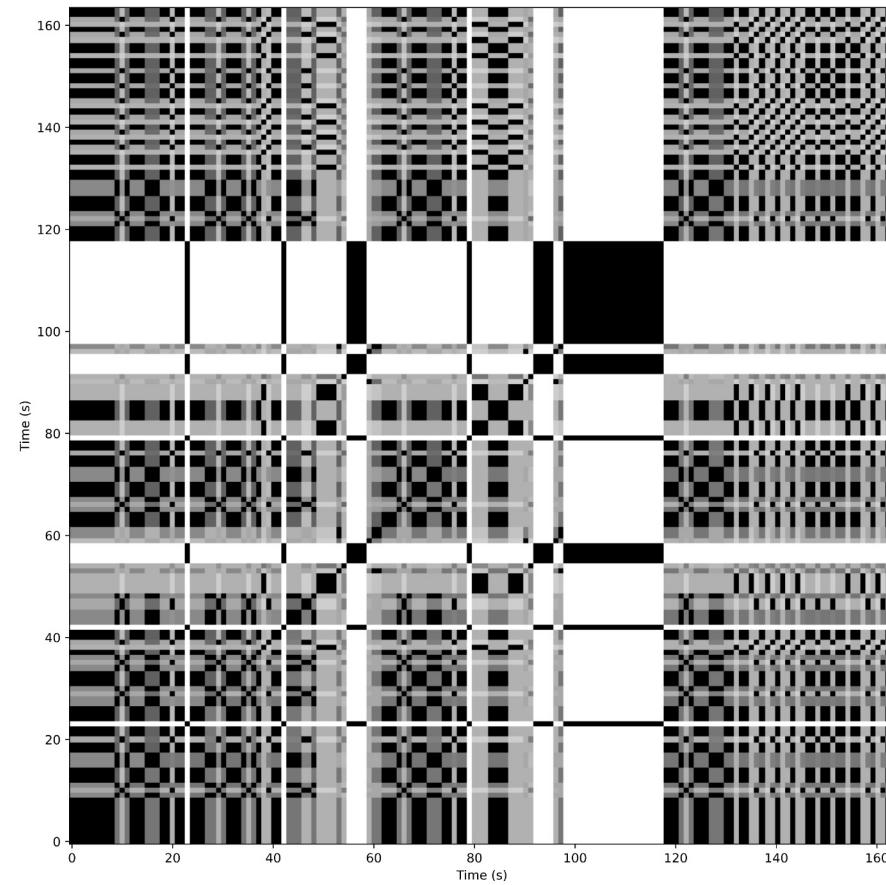


TPS sequence: [2.0, 3.5, 0.0, 8.9, ...]



2. Novelty-based Harmonic Segmentation

- A **Self Similarity Matrix (SSM)** is encoded starting from the TPS sequences
- Self-similarity matrices have been extensively used for **structure analysis on the audio signal**, due to their ability to reveal nested structural elements

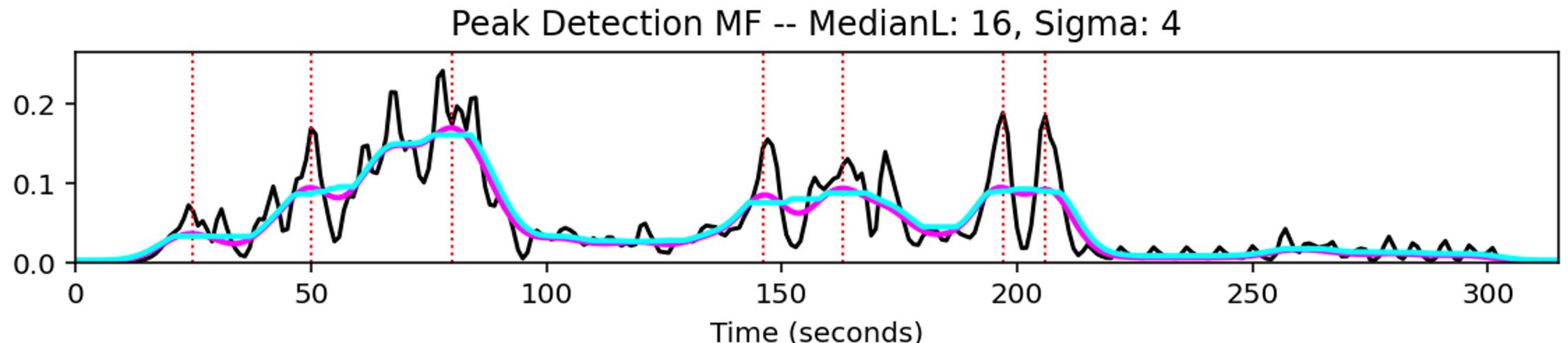


SSM of the track “*Crazy Little Thing called Love*” UNIVERSITÀ DI BOLOGNA



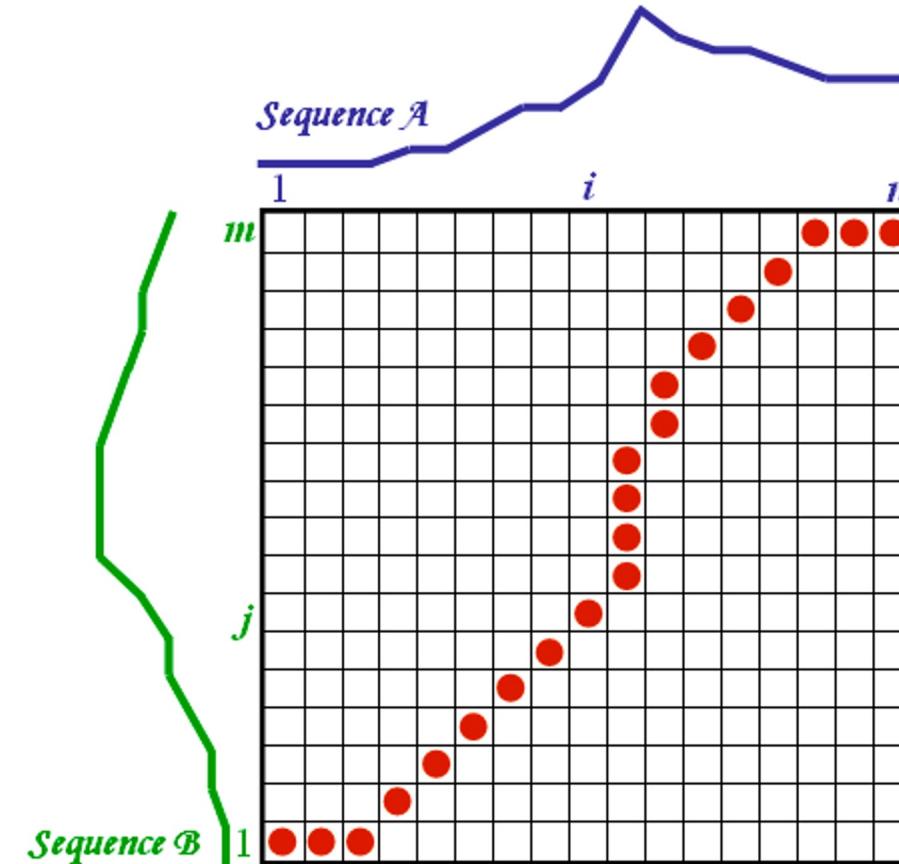
2. Novelty-based Harmonic Segmentation (2)

- To identify boundaries a **checkboard kernel (K)** is滑动 along the SSM main diagonal: this creates a **Novelty Curve**:
 - When K is located in a uniform region, **novelty** will be **low**
 - When K is at the crux of a checkerboard-like structure, **novelty** will be **high**
- Local maxima of the novelty curve are then used to **detect the boundaries** of neighbouring segments



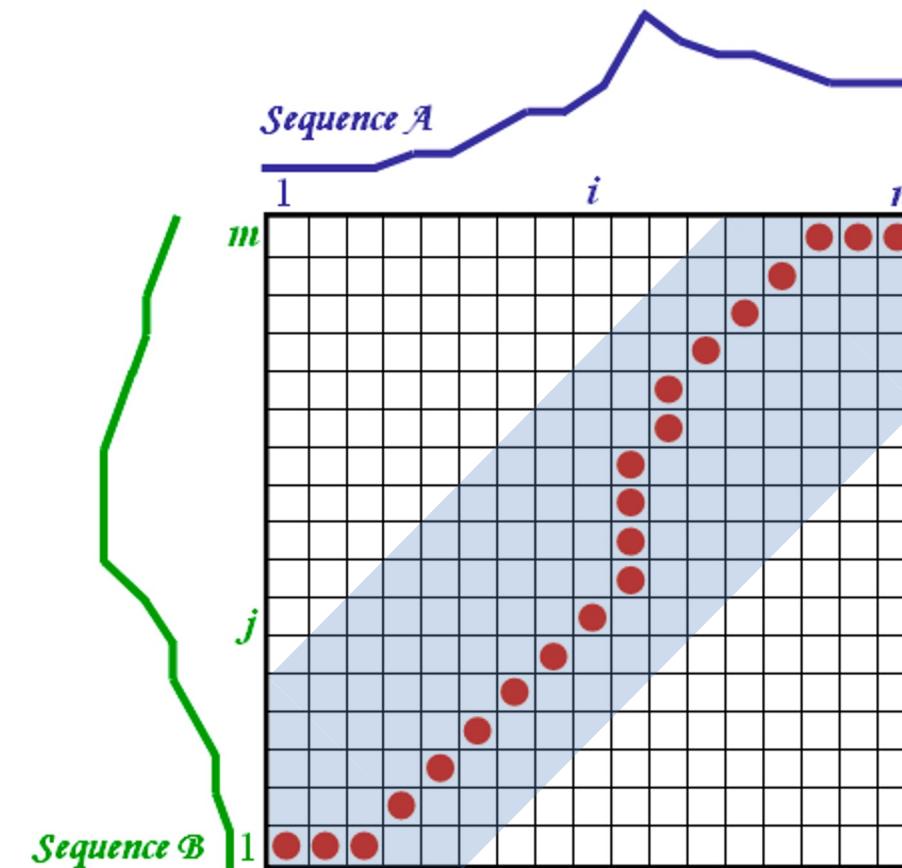
3. Linking Harmonic Segments via Similarity

- The TPS encoded sequences are compared using a **Dynamic Time Warping (DTW) algorithm**
- DTW is used for comparing and aligning time sequences (usually in the audio domain)
- DTW allows for non-linear alignment between the time series by considering the local warping path



3. Linking Harmonic Segments via Similarity (2)

- We used a variant of the vanilla DTW algorithm: **Sakoe-Chiba**
- Sakoe-Chiba allows to **constraint the search space** of the algorithm within a band (w)
- This leads to a drop in computational time complexity:
 - Vanilla DTW: $O(N^2)$
 - Sakoe-Chiba DTW: $O(N * w)$

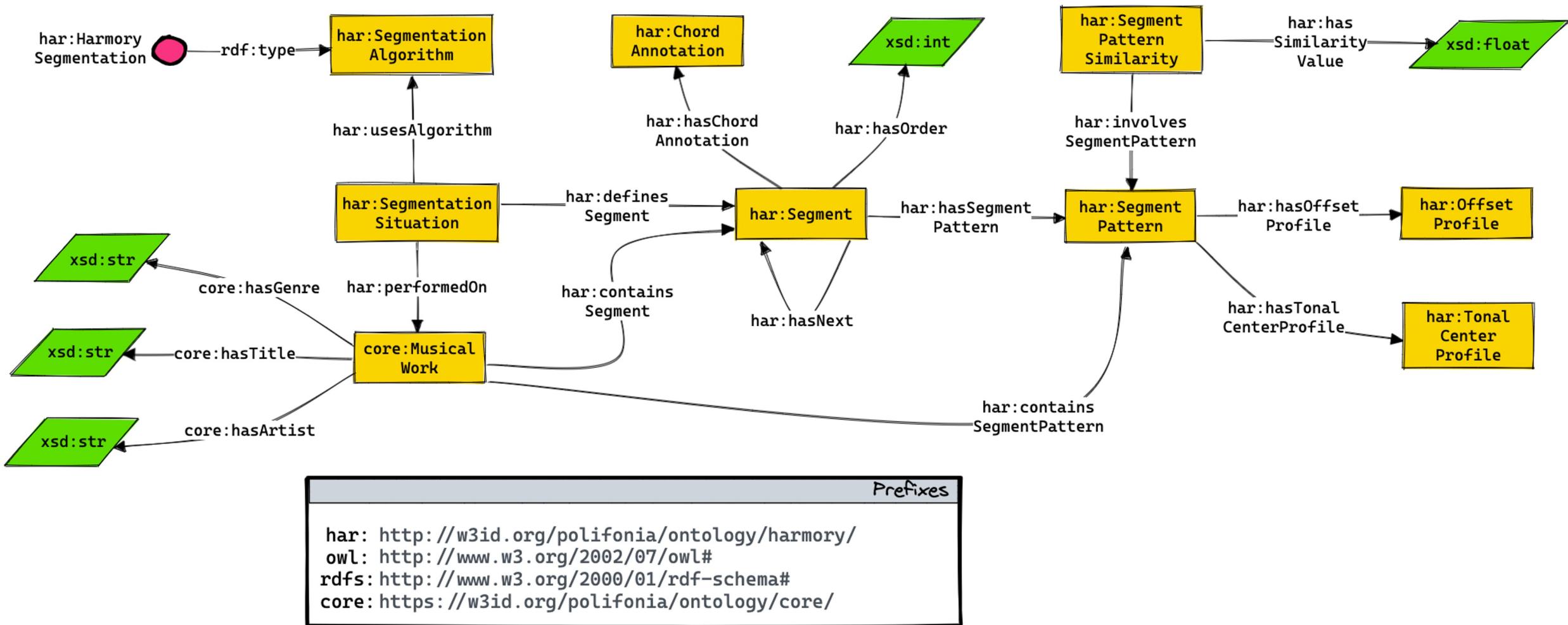


4. Knowledge Graph Creation

- An **ontology** for describing Harmory data has been created
- The ontology is part of the **Polifonia Ontology Network (PON)**
- Data has been transformed using **RDFLib**
- The generated Knowledge Graph contains **1429070 triples**



4. Knowledge Graph Creation (2)



Avenues for Computational Creativity: 1 – Pattern Discovery

The traversal of the Harmonic Memory makes it possible to obtain granular information of the harmonic structure of songs

Prompt 1: *For a given pattern, which are the tracks (titles, artists and genres) in which the pattern can be found?*

Prompt 2: *Which harmonic patterns are used in “Michelle” by The Beatles, but also in a classical composition?*

Prompt 3: *Which tracks include a dominant cycle in seven steps?*



Avenues for Computational Creativity: 2 – Chord Generation

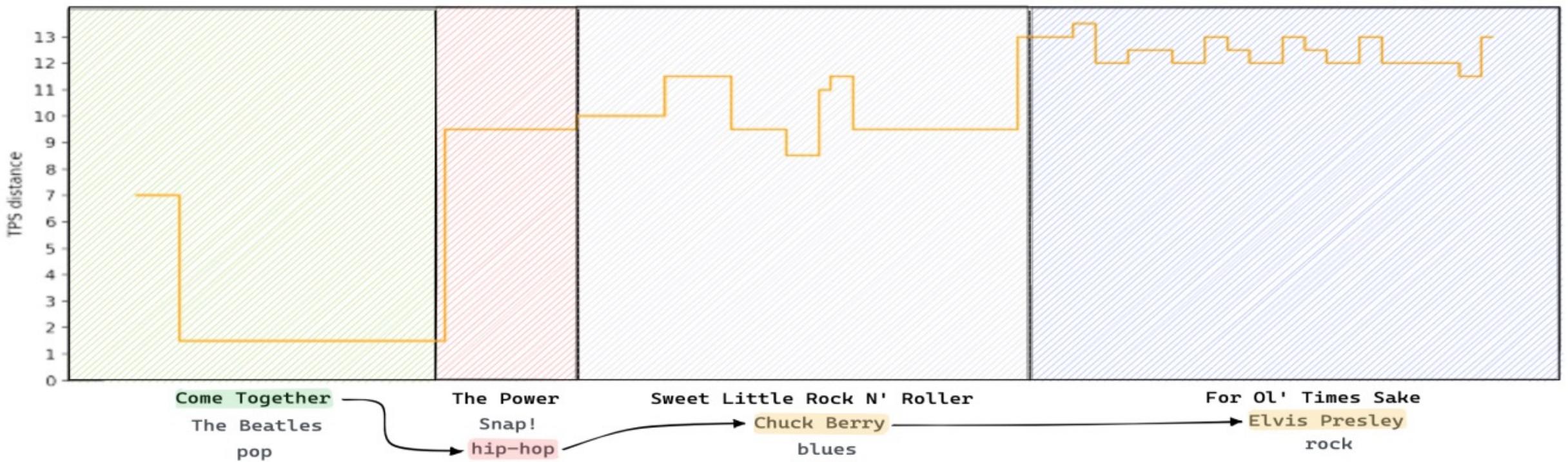
Harmory also enables combinational creativity use cases:

Prompt 4: *Given a chord sequence, which are its variations, and which tracks these variations belong to?*

Prompt 5: *Create a progression starting with “Come Together” by The Beatles, continuing with a segment found in a Rap song, and then continuing with another by Chuck Berry and Elvis Presley*



Avenues for Computational Creativity: 2 – Chord Generation



Avenues for Computational Creativity: 3 – Harmonic Similarity

From a musicological perspective, the KG can also be used to analyse similarity relations between tracks:

Prompt 6: *Given a track, which tracks contain patterns with a distance of less than 0.2?*



04

EXERCISE(s)



Task Description

- The exercise consists in **querying Knowledge Graphs you are not familiar with**
- The two knowledge graphs have been introduced during this lecture, namely:
 - *ChoCo*
 - *Harmony*
- You will be provided with a **sample query** and a few **competency questions**
- Working in pairs, you are asked to create SPARQL queries from:
 - One (or more) competency questions
 - New competency questions you will define (be creative!)



Exercise Link

<https://github.com/andreamust/semantic-music-lecture>



Exercise Link

The screenshot shows a GitHub repository page for 'andreamust/semantic-music-lecture'. The repository is public and contains one branch ('main') and one tag ('0.1'). The repository has 9 commits, with the most recent being an update to README.md. A commit from May 15, 2023, at 2:09 AM GMT+2, titled 'Initial commit', is highlighted. The repository has 0 stars, 1 watching, and 0 forks. The 'About' section describes the material as 'Material for the lecture in Artificial Intelligence on the interaction between music and Semantic Web technologies.' The 'README.md' file is open, showing the title 'Semantic Web Technologies in the Musical Domain' and a brief description of the repository's purpose. The 'Lecture Overview' section provides an introduction to the application of semantic technologies in music. The 'Exercise Section' is mentioned as providing hands-on experience with querying knowledge graphs in the musical domain.

andreamust / semantic-music-lecture Public

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

main 1 branch 0 tags Go to file Add file <> Code About

andreamust Update README.md 3c0be11 4 minutes ago 9 commits

exercise Update README.md 4 minutes ago

ignore Initial commit 11 hours ago

LICENSE Update LICENSE 9 hours ago

README.md Update README.md 9 hours ago

README.md

Semantic Web Technologies in the Musical Domain

This repository hosts the materials for the lecture on *Semantic Web Technologies in the Musical Domain*, specific for the course in *Knowledge Engineering* at the Master in Artificial Intelligence (University of Bologna, a.y. 2022/2023).

Lecture Overview

The lecture on Semantic Web Technologies in the Musical Domain provides an introduction to the application of semantic technologies in the field of music. It covers various aspects related to music concepts, the representation of musical knowledge using ontologies, and the practical implementation of these concepts through real-world use cases.

The presentation and all the material presented in the lecture can be found in the [assets](#) folder.

Exercise Section The exercise section of this repository is designed to provide hands-on experience with querying knowledge graphs in the musical domain. Specifically, the exercises focus on querying the knowledge graphs of two prominent use cases: ChoCo and Harmory. These exercises will enable you to gain practical insights into retrieving and manipulating musical data using semantic technologies.

Pin Unwatch 1 Fork 0 Star 0

About

Material for the lecture in Artificial Intelligence on the interaction between music and Semantic Web technologies.

Readme May 15, 2023, 2:09 AM GMT+2
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Exercise Overview

1. Divide the class in **pairs**
2. **Pick one project** (*Harmony* or *ChoCo*)
3. **Fork** the repository
4. **Get familiar** with the Knowledge Graph and the Ontology
5. Write a SPARQL Query for one of the **predefined Competency Questions**
6. **Create you own** Competency Question
7. **Submit** your queries opening a **pull-request**



Querying ChoCo

```

6  SELECT DISTINCT ?observationValue ?startTime ?startTimeType ?duration ?durationType
7  WHERE {
8    ?recording a mp:Recording ;
9      mc:hasTitle "Michelle" ;
10     jams:hasJAMSAnnotation ?annotation .
11     ?annotation jams:includesObservation ?observation ;
12     jams:hasAnnotationType "chord" .
13     ?observation rdfs:label ?observationValue ;
14     jams:hasMusicTimeInterval [ jams:hasMusicTimeDuration [ jams:hasValue ?duration ; jams:hasValueType ?durationType ] ;
15       jams:hasMusicTimeStartIndex [ jams:hasMusicTimeIndexComponent [ jams:hasValue ?startTime ; jams:hasValueType ?startTimeType ] ] ] .
16   }
17   ORDER BY (?startTime)
18   LIMIT 10

```

Raw Response **Table** Pivot Table Google Chart [Download](#)

Search: Show 50 entries

	observationValue	startTime	startTimeType	duration	durationType
1	N	"0.0"^^xsd:float	http://w3id.org/polifonia/resource/ValueType/Second	"0.421247"^^xsd:float	http://w3id.org/polifonia/resource/ValueType/Second
2	F:min/5	"0.421247"^^xsd:float	http://w3id.org/polifonia/resource/ValueType/Second	"0.994128"^^xsd:float	http://w3id.org/polifonia/resource/ValueType/Second
3	E:aug	"1.415375"^^xsd:float	http://w3id.org/polifonia/resource/ValueType/Second	"0.959432"^^xsd:float	http://w3id.org/polifonia/resource/ValueType/Second
4	F:min7	"2.374807"^^xsd:float	http://w3id.org/polifonia/resource/ValueType/Second	"1.010068"^^xsd:float	http://w3id.org/polifonia/resource/ValueType/Second
5	F:min6/5	"3.384875"^^xsd:float	http://w3id.org/polifonia/resource/ValueType/Second	"0.986848"^^xsd:float	http://w3id.org/polifonia/resource/ValueType/Second
6	C#:maj7/3	"4.371723"^^xsd:float	http://w3id.org/polifonia/resource/ValueType/Second	"1.085346"^^xsd:float	http://w3id.org/polifonia/resource/ValueType/Second
7	Bb:min/5	"5.457069"^^xsd:float	http://w3id.org/polifonia/resource/ValueType/Second	"0.459543"^^xsd:float	http://w3id.org/polifonia/resource/ValueType/Second
8	C#/3	"5.916612"^^xsd:float	http://w3id.org/polifonia/resource/ValueType/Second	"0.521956"^^xsd:float	http://w3id.org/polifonia/resource/ValueType/Second
9	C	"6.438568"^^xsd:float	http://w3id.org/polifonia/resource/ValueType/Second	"2.031476"^^xsd:float	http://w3id.org/polifonia/resource/ValueType/Second



Querying Harmony

```
4 PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
5
6 SELECT DISTINCT ?pattern ?title1 ?title2
7 WHERE {
8     ?pattern har:refersToSegment ?segment .
9     ?segment har:belongsToMusicalWork ?track1 .
10    ?track1 core:hasArtist ?artist1 ;
11        core:hasTitle ?title1 .
12    ?track2 core:hasArtist ?artist2 ;
13        core:hasTitle ?title2 .
14
15    FILTER (?title1 = "Michelle")
16    FILTER (?title2 = "Sunshine of Your Love")
17 }
18 LIMIT 10
```



Raw ResponseTablePivot TableGoogle ChartSearch: Show 50 entries

	pattern	title1	title2
1	http://w3id.org/polifonia/harmony/8.5_10.0_10.0_10.5_10.5_8.0_10.5_8.0_8.0_4.0_4.0_8.5_8.5_10.0_10.0_10.5_10.5_8.0_10.5_8.0	Michelle	Sunshine of Your Love
2	http://w3id.org/polifonia/harmony/4.0_4.0_8.5_8.5_8.5_10.0_10.0_10.5_8.0_10.5_8.0	Michelle	Sunshine of Your Love
3	http://w3id.org/polifonia/harmony/4.0_4.0_8.5_8.5_10.0_10.0_10.5_10.5_8.0_10.5_8.0	Michelle	Sunshine of Your Love
4	http://w3id.org/polifonia/harmony/8.0_0.0_0.0_0.0_0.0_8.0_8.0_7.0_7.0_5.5_5.5_0.0_0.0_0.0_7.5_0.5_1.0_6.5_6.5_5.5_5.5	Michelle	Sunshine of Your Love
5	http://w3id.org/polifonia/harmony/8.0_0.0_0.0_0.0_0.0_8.0_8.0_7.0_7.0_5.5_5.5_0.0_0.0_0.0_7.5_0.5_1.0_6.5_6.5_6.5_5.5_5.5	Michelle	Sunshine of Your Love
6	http://w3id.org/polifonia/harmony/8.0_0.0_7.5_0.5_0.5_1.0_6.5_6.5_5.5_4.0	Michelle	Sunshine of Your Love
7	http://w3id.org/polifonia/harmony/4.0_8.5_8.5_10.0_10.0_10.0_10.5_10.5_8.0_10.5_8.0_8.0_4.0_4.0_8.5_8.5_10.0_10.0_10.0	Michelle	Sunshine of Your Love
8	http://w3id.org/polifonia/harmony/7.5_0.5_1.0_6.5_6.5_7.0_5.5_5.5_4.0_4.0_8.5	Michelle	Sunshine of Your Love



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