

Experimenting with Parameterizable Similarity Measures

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Rank Relative URI Absolute

1 0.0 [0-OGL19914.mid](#) 0.0 [Midi](#) [All](#) [Browse](#) [All](#) [PDF](#) [All](#)

2 0.01333146696528555 [0-OGL20512.mid](#) 0.14286 [Midi](#) [All](#) [Browse](#) [All](#) [PDF](#) [All](#)

Ik ben er van de - ze mor - gen en vroeg op - ge - staan

2 0.01333146696528555 [0-OGL41104.mid](#) 0.14286 [Midi](#) [All](#) [Browse](#) [All](#) [PDF](#) [All](#)

Ik ben d'r van de - ze mor - gen en vroeg op - ge - staan.

4 0.04665920119447555 [0-OGL37303.mid](#) 0.5 [Midi](#) [All](#) [Browse](#) [All](#) [PDF](#) [All](#)

Ik ben d'r van de - ze mor - gen en vroeg op - ge - staan

5 0.14072415080253828 [0-OGL33411.mid](#) 1.508 [Midi](#) [All](#) [Browse](#) [All](#) [PDF](#) [All](#)

The Answer is: 42

Hmm, interesting,
but what is the question?

OHR

Hum-
drum

The collage features several key elements:

- Top Left:** A Pure Data patch window showing various signal processing objects like 'loadbang', 'unpack', and 'pack'.
- Top Right:** A MIDI piano roll window with a grid for notes and a 'Single Click' button.
- Center:** A large circular inset containing a 3D visualization of a complex, multi-lobed shape with a color gradient from purple to orange.
- Bottom Left:** A terminal window showing a shell prompt and several lines of code, including 'cd s', 'yank', and 'kern2ehd'.
- Bottom Right:** Another Pure Data patch window, similar to the top-left one, but with a different configuration of objects and a waveform display at the bottom.
- Right Side:** A network graph visualization with nodes and connecting lines.

Rubato

Open-
Music

Music Retrieval Ingredients

- An explicit or implicit Query
 - A Goodness of Fit Measure (e.g. Matching Characteristics or Similarity)
 - A Database
- => Ranked Result List

Similarity Research Activities

- Start with a similarity or goodness of fit measure implementation
- Experiment with it in a concrete context
- Tweak parameters
- Have another measure and compare
- Combine those two measures
- Goto 1 with different choices (=queries)
- Maybe train parameters

Software needs

- An implementation of a boolean or real-valued function
- An applicator that feeds scores & parameters
- Value based filters & rankers
- Speed in Interaction & Computing

Our Testing Environment

- Wraps existing implementations (from common languages)
- Presents UI forms to parameterize filters and measures
- Shows/explains results (HTML)
- Shows a table to compare measures
- Supports Logical / numerical combinations
- Speeds up recalculations
- Allows to save/load user configurations via a simple hierarchical preference system



Layer

File Constraints Raters Run Window Utils

0 SimileRater [SimileRater]

File Settings Filtered Inspect

Processor: active Cache: use write drop Filter threshold: 0.0

Distance Measure: conSEd

MidiFile2: /ts/WitchCraft/html/muugle/midfiles/0-OGL1914

min: -1.0 max: -0.0 avg: -0.10486295172413816 med: -0.0714286

Parameters Ranks

1 SimileRater [SimileRater]

File Settings Filtered Inspect

Rank	Relative	URI	Absolute
1	0.0	/Library/WebServer/Documents/Witc	
2	0.08333381944436338	/Library/WebServer/D	/Library/WebServer/D
2	0.08333381944436338	/Library/WebServer/D	/Library/WebServer/D
2	0.08333381944436338	/Library/WebServer/D	/Library/WebServer/D
2	0.08333381944436338	/Library/WebServer/D	/Library/WebServer/D
6	0.1666664722225464		/Library/WebServer/D

Parameters Ranks

Preferences

Set Add Delete DeleteTree ShowParams

/reiswissen/evaluation/UserConfigurations/

MIRSymposium/CompareEMD

3 MidiFileDistanceRater [MidiFileDistanceRater]

File Settings Filtered Inspect

Processor: active Cache: use write drop Filter threshold: 0.0

System-Call: Command[j] Transform(Resource1) Pitch-Factor Transform(Resource2)

Distance Routine: 2

Transform: 2

Norms: 0 2 1

Factors: 1.0 1.0 1.0

MidiFile2: /ts/WitchCraft/html/muugle/midfiles/0-OGL19914.mid

Note Begin: 0

Note End (excl): 30

Remark: Distance and Transform given by Index.

Remark: Separate Factors with single spaces!

min: 0.0 max: 10.716 avg: 4.587770482758623 med: 4.5447

Parameters Ranks

Results (1)

Processor	L00404	L00603	L01805	1805_2	L08202	L09002
L00404	L00603	L01805	1805_2	L08202	L09002	
0 SimileRa...	18: -0.14...	37: -0.07...	37: -0.07...	15: -0.21...	102: -0.0...	
1 SimileRa...	22: -0.42...	22: -0.42...	73: -0.28...	39: -0.35...	73: -0.28...	39: -0.35...
2 Accumul...	23: -0.15...	33: -0.14...	77: -0.09...	47: -0.12...	43: -0.12...	69: -0.10...
3 MidiFile...	41: 3.437...	134: 7.12...	52: 3.673...	13: 2.676...	101: 5.25...	118: 6.40...

Last Log



Layer

File Constraints Raters Run Window Utils

2 AccumulatorRater [AccumulatorRater]

File Settings Filtered Inspect

Processor: active Cache: use write drop

Indices refer to:

Accumulator

Layers up: 0

Indices: 0 1

(Layer,Index)-References:

Value := factor*value + offset

Factors: 0.4 0.6

Offsets: 0

33: -0.14285702~781: No HTML details available.

Parameters Ranks

Preferences

Set Add Delete DeleteTree ShowParams

/reiswissen/evaluation/UserConfigurations/

MIRSymposium/CompareEMD

3 MidiFileDistanceRater [MidiFileDistanceRater]

File Settings Filtered Inspect

Processor: active Cache: use write drop Filter threshold: 0.0

System-Call: Command[j] Transform(Resource1) Pitch-Factor Transform(Resource2)
Distance Routine: 2

Transform: 2

Norms: 0 2 1

Factors: 1.0 1.0 1.0

MidiFile2: ts/WitchCraft/html/muugle/midfiles/0-OGL19914.mid

Note Begin: 0

Note End (excl): 30

Remark: Distance and Transform given by Index.

Remark: Separate Factors with single spaces!

134: 7.1262~665: Compared

[Library/WebServer/Documents/WitchCraft/html/muugle/midfiles/0-OGL00603.midwith/Librarv/WebServer/Documents/WitchCraft/html/muugle/midfiles/0-OGL19914.mid](#)

Parameters Ranks

Results (1)

Processor	L00404	L00603	L01805	1805_2	L08202	L09002
0 SimileRa...	18: -0.14...	37: -0.07...	37: -0.07...	37: -0.07...	15: -0.21...	102: -0.0...
1 SimileRa...	22: -0.42...	22: -0.42...	73: -0.28...	39: -0.35...	73: -0.28...	39: -0.35...
2 Accumul...	23: -0.15...	33: -0.14...	77: -0.09...	47: -0.12...	43: -0.12...	69: -0.10...
3 MidiFile...	41: 3.437...	134: 7.12...	52: 3.673...	13: 2.676...	101: 5.25...	118: 6.40...
2-Details	====	====	====	====	====	====

Last Log

User-Model

- The developer provides raw implementations
- The experimenter finds and saves good parameter settings for particular applications under meaningful categories
- Results are pre-calculated for these “semantic” settings
- End users can select from or refine these preconfigured processes in different contexts

Contact

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