Errata for the book

Music Data Analysis: Foundations and Applications

by

Claus Weihs, Dietmar Jannach, Igor Vatolkin and Günter Rudolph (Eds.)

Department of Statistics and Department of Computer Science
TU Dortmund University, Germany

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Notation

Unfortunately, some errors have been found already.
In this document, we will explain which parts contain errors (marked “←”) and are to be replaced by parts marked “→”.
Text to be removed is printed in red, new text in blue color.

1. Introduction
2. The Musical Signal: Physically and Psychologically
3. Musical Structures and Their Perception
4. Digital Filters and Spectral Analysis
5. Signal-Level Features
6. Auditory Models
7. Digital Representation of Music
8. Music Data: Beyond the Signal Level
9. Statistical Methods

← (page 226) ... 14 chroma features.
→ ... 14 timbre features.

← (page 226) As chroma features we rely on ...
→ As timbre features we rely on ...

← (page 226) The windowed MFCCs and the chroma variables ...
→ The windowed MFCCs and the timbre variables ...

← (page 253, Figure 9.9,left) x-axis label “non-windowed MFCC 1”, y-axis label “MFCC 1 in block 1”
→ x-axis label “MFCC 1 in block 1”, y-axis label “non-windowed MFCC 1”

← (page 253) ... the MFCCs and the chroma features introduced in Example 9.9.
→ ... the MFCCs and the timbre features introduced in Example 9.9.

← (page 256) If the time unit is a second, n is also measured in Hz.
→ If the time unit is a second, f is also measured in Hz.

← (page 257) K = number of simultaneously played tones,
→ J = number of simultaneously played tones,

← (page 259) There are, e.g., 14 chroma variables of block 1.
→ There are, e.g., 14 timbre variables of block 1.

← (page 261) ... , this time the 14 chroma variables of block 1.
→ ... , this time the 14 timbre variables of block 1.

← (page 261; Figure 9.12,Biplot) “chroma” labels
→ “timbre” labels

← (page 261; Figure 9.12,caption) First 2 principal components of 14 chroma vectors
→ First 2 principal components of 14 timbre vectors
First 2 original chroma vectors.

First 2 original timbre vectors.

... directions of the first two chroma elements ...

... directions of the first two timbre elements ...

The other chroma elements ...

The other timbre elements ...

... the first two original chroma elements ...

... the first two original timbre elements ...

10. Optimization

11. Unsupervised Learning

... and windowed), chroma variables, ...

... and windowed), timbre variables, ...

... and the 14 chroma features of block 1.

... and the 14 timbre features of block 1.

... contains both MFCC and chroma features.

... contains both MFCC and timbre features.

... otherwise containing only chroma features.

... otherwise containing only timbre features.

... than to the chroma features, ...

... than to the timbre features, ...

chroma labels

timbre labels

12. Supervised Classification

13. Evaluation

The only values we have to calculate are $H_{FT}$ and $H_{TF}$ on the test sample.

The only values we have to calculate are $H_{FT}$ and $H_{TF}$ on the test sample, where the instances are the 120 complete music tracks, i.e. we aggregate the predictions using Equation (13.19).
14. Feature Processing

15. Feature Selection

$P(c) = \frac{\sum_{y\in\mathcal{Y}_c} 1}{G}$

16. Segmentation

17. Transcription

18. Instrument Recognition

19. Chord Recognition

20. Tempo Estimation

21. Emotions

22. Similarity-Based Organization of Music Collections

23. Music Recommendation

24. Automatic Composition

25. Implementation Architectures

26. User Interaction

27. Hardware Architectures for Music Classification