



Technische Universität Berlin

Fakultät I - Geisteswissenschaften
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Audiokommunikation und -technologie M.Sc.

Self-Organizing Maps for Sound Corpus Organization

MASTER'S THESIS

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Eidesstattliche Erklärung

Hiermit erkläre ich, dass ich die vorliegende Arbeit selbstständig und eigenhändig sowie ohne unerlaubte fremde Hilfe und ausschließlich unter Verwendung der aufgeführten Quellen und Hilfsmittel angefertigt habe.

Berlin, den February 7, 2019

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Jonas Margraf

Abstract An english abstract.

Zusammenfassung Die Zusammenfassung auch auf Deutsch.

Acknowledgements

This is where the thank yous go.

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1 Introduction

This is the Introduction.

1.1 Motivation and Problem Description

1.2 Aims and Objectives

1.3 Previous Work

2 Background

This is the Background section.

2.1 Audio Feature Extraction

2.1.1 Fundamentals

2.1.2 Audio Pre-Processing

2.1.3 Time-Domain Features

2.1.3.1 Root Mean Square (RMS) Root Mean Square (RMS) goes here.

2.1.3.2 Zero-Crossing Rate (ZCR)

2.1.4 Frequency-Domain Features

2.1.4.1 Spectral Centroid

2.1.4.2 Spectral Flatness

2.1.4.3 Spectral Kurtosis

2.1.4.4 Spectral Skewness

2.1.4.5 Spectral Slope

2.1.4.6 Spectral Spread

2.1.4.7 Spectral Rolloff

2.1.5 Perceptual Features

2.1.5.1 Loudness

2.2 Self-Organizing Map

Something about Self-Organizing Maps (SOMs) and also neurons have IDs.

3 Implementation

This is the Implementation.

3.1 Groundwork: CataRT Extension

3.2 SOM Browser

4 Evaluation

This is the Evaluation.

4.1 Measuring SOM-Induced Quantization

4.2 Online Sound Similarity Survey

4.3 Semistructured User Interviews

5 Results

This is the Results section.

6 Discussion

This is the Discussion.

6.1 Outlook

Appendices

A LaTeX Sources

The \LaTeX sources for this work can be found in XXX.

B Thesis Bibliography

The references used in this work can be found in XXX.

Glossary

ID A name or number that identifies an object.

Acronyms

RMS Root Mean Square.

SOM Self-Organizing Map.

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Digital Resource

This page holds a data disk.