Faculty of Applied Economics

Dissertation

COMPOSE=COMPUTE

Computer Generation and Classification of Music through Operations Research Methods

Thesis submitted in order to obtain the degree
of
Doctor in Applied Economics

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Add the acknowledgement text.

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INTRODUCTION

Intro text.

This template is an enhanced version of classicthesis which contains many adjustments for headings, fonts, index etc.

To update the index, run the command 'makeindex thesis' in a terminal.

Part 1

YOUR FIRST PART

1

MY CHAPTER

This chapter is based on the paper "D. Herremans, D. Martens, K. Sörensen. 2014. Dance Hit Song Prediction. *Journal of New Music Research – special issue on music and machine learning*. 43(3):291–302."

Your chapter abstract. Add words to the index like so. This talks about an important algorithm .

Nunc sed pede. Praesent vitae lectus. Praesent neque justo, vehicula eget, interdum id, facilisis et, nibh. Phasellus at purus et libero lacinia dictum. Fusce aliquet. Nulla eu ante placerat leo semper dictum. Mauris metus. Curabitur lobortis. Curabitur sollicitudin hendrerit nunc. Donec ultrices lacus id ipsum.

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Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.

Here is another mention of the word algorithm to add to the index.

Example equation:

$$P(\mathbf{x}|Y = y) = \prod_{j=1}^{M} P(x_j|Y = y), \tag{1.1}$$

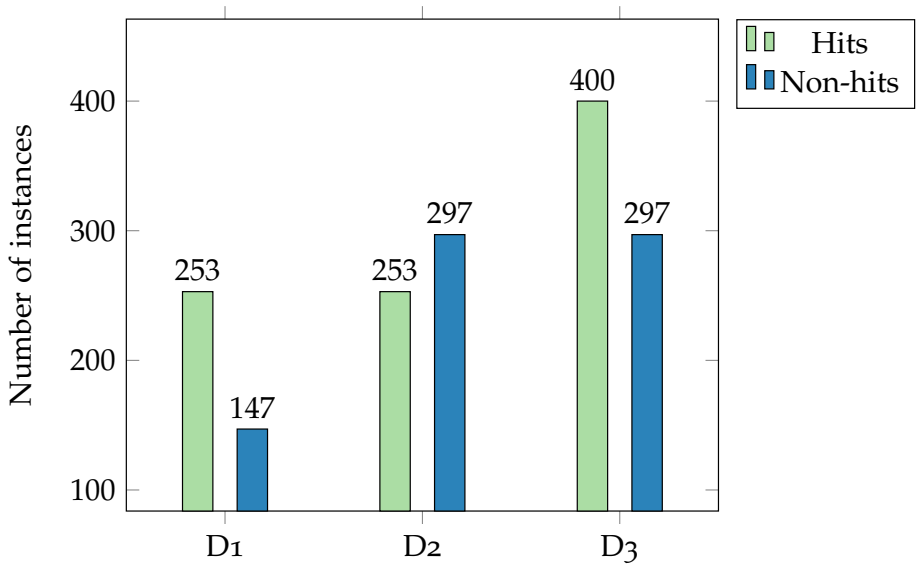

Figure 1.1.: Example figure

Table 1.1.: Example table

Song title	Artist	Position	Date	Peak position
Harlem Shake	Bauer	2	09/03/13	1
Are You Ready For Love	Elton John	40	08/12/12	34
The Game Has Changed	Daft Punk	32	18/12/10	32
...				

whereby each attribute set $\mathbf{x} = \{x_1, x_2, \ldots, x_N\}$ consists of M attributes.

Part 2

THE OTHER PART: EXPERIMENTS

CONCLUSIONS

Conclusion text.

DUTCH SUMMARY

Summary in other language needed?

A

MY TITLE FOR APPENDIX

SUBTITLE IF NEEDED

The appendix material.

B

ANOTHER APPENDIX

The actual material.

C

LIST OF PUBLICATIONS

Journal articles

If your university requires you to list the (own) publications your document is based on:

D. Herremans, K. Sörensen. 2012. **Composing first species counterpoint musical scores with a variable neighbourhood search algorithm**. *Journal of Mathematics and the Arts*. 6(04):169-189.

D. Herremans, K. Sörensen. 2013. **Composing Fifth Species Counterpoint Music With A Variable Neighborhood Search Algorithm**. *Expert Systems with Applications*. 40(16):6427–6437.

D. Herremans, D. Martens, K. Sörensen. 2014. **Dance Hit Song Prediction**. *Journal of New Music Research – special issue on music and machine learning*. 43(3):291–302

D. Herremans, K. Sörensen, D. Martens. 2014. **Looking into the minds of Bach, Haydn and Beethoven: Classification and generation of composer-specific music**. Working Paper 2014001. *Faculty of Applied Economics, University of Antwerp*.

D. Herremans, S. Weisser, K. Sörensen, and D. Conklin. 2014. **Generating structured music using quality metrics based on Markov models**. Working Paper 2014019. *Faculty of Applied Economics, University of Antwerp*.

Proceedings

D. Herremans, K. Sörensen. 2013. **FuX, an Android app that generates counterpoint**. *Proceedings of IEEE Symposium on Computational Intelligence for Creativity and Affective Computing (CICAC)*. Singapore. 48-55.

D. Herremans, K. Sörensen and D. Conklin. 2014. **Sampling the extrema from statistical models of music with neighbourhood search**. *Proceedings of ICMC–SMC*. Athens. 1096–1103.

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