Universidade Federal de Pernambuco

Centro de Informática

Improvements in a Gaussian Mixture Models based Speaker Verification System using Fractional Covariance Matrix

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Abstract

TODO EDITAR Abstract goes here

Dedication

TODO EDITAR To mum and dad

Declaration

TODO EDITAR I declare that..

Acknowledgements

I am thankful to my parents, for the support and patience during the graduation,
To my adviser, Tsang Ing Ren, for the guidance,
To Cleice Souza, for the previous readings and help.

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Introduction

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Speaker Recognition System

Chapter 3

Feature Extraction

TODO referenciar Davis and Mermelstein [1], mostrando que seus experimentos colocam o MFCC como uma técnica de representação de características melhor que as demais (LFCC, LPC, RC e LPCC).

TODO durante a escrita, refazer os "main" dos módulos Python. Deixar somente o necessário e gerar como output as figuras utilizadas (como o banco de filtros, a escala mel e etc.).

3.1 Mel Frequency Cepstral Coefficient

3.1.1 The Mel Scale

Chapter 4

Gaussian Mixture Models

Chapter 5

Fractional Covariance Matrix

Chapter 6

Experiments

Chapter 7

Conclusion

Appendix A

Codes

Bibliography

[1] Steven B. Davis and Paul Mermelstein. "Comparison of Parametric Representations for Monosyllabic Word Recognition in Continuously Spoken Sentences". In: *IEEE Transactions on Acoustics, Speech, and Signal Processing* ASSP-28.4 (1980), pp. 357–366.