SPOKEN LANGUAGE ACCENT DETECTION

Probabilistic Accent Detection Using Hidden Markov Models

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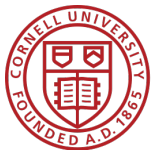

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CONTENTS

PREFACE

All information presented within this document represents our exploration of the HTK software. We make no guarantee of things things things

INTRODUCTION

This is the introduction. This is the introduction. This is the introduction. This is the introduction. This is the introduction. This is the introduction.

REFERENCES

[1] J. S. Kilby, "Invention of the Integrated Circuit," *IEEE Trans. Electron Devices,* **ED-23,** 648 (1976).

[2] R. W. Hamming, *Numerical Methods for Scientists and Engineers*, Chapter N-1, McGraw-Hill, New York, 1962.

[3] J. Lee, K. Mayaram, and C. Hu, "A Theoretical Study of Gate/Drain Offset in LDD MOSFETs" *IEEE Electron Device Lett.,* **EDL-7**(3). 152 (1986).

PART I

HIDDEN MARKOV MODEL TOOLKIT SOFTWARE SUITE

CHAPTER 1

INSTALLATION OF HTK SOFTWARE

talk about installation stuff here, I guess

1.1 Mac OSX

1.2 Windows

CHAPTER 2

TRAINING CORPUS ACQUISITION

CHAPTER 3

TRAINING CORPUS WITH HTK

> The sheer volumne of answers can often stifle insight...The purpose of computing is insight, not numbers.
>
> —Hamming [2]

3.1 Record or Input Sound Files

Here is some text.

3.2 Labeling the Sound Files

Here are some things you can do for a special section head.

3.3 General Remarks

Here is some normal text. Here is some normal text. Here is some normal text.

CHAPTER 4

CODING THE DATA

4.1 Mel Frequency Cepstral Coefficients

Here we describe what a MFCC is and its usefulness to us.

4.2 Obtaining .mfcc Files

4.2.1 Configuration File

Screenshot of the configuration file along with justification of the various parameters

4.2.2 Command Line Actions

4.2.2.1 The Creation of targetlist.txt

CHAPTER 5

SETTING PARAMETERS FOR THE HIDDEN MARKOV MODEL

Multiple things should happen here:

1. Explain what an HMM is and what it is useful for
2. Explain particularly why it works for what we are doing
3. Describe the input parameters to a hidden markov model
4. Explain why we made any changes to what the original tutorial had/any issues we encountered (i.e. errors being raised when we tried to have too many states due to not having enough training examples for all those states)

I have some sample sections below following the list above:

5.1 What is a Hidden Markov Model?

Here is some sample text.

5.2 HMMs and Accent Detection

Lorem ipsum Lorem ipsum Lorem ipsum Lorem ipsum Lorem ipsum Lorem ipsum

5.3 Input Parameters to HMMs

Lorem ipsum Lorem ipsum Lorem ipsum Lorem ipsum Lorem ipsum Lorem ipsum

5.4 Justification for our Modifications

5.5 Summary

This is a summary of this chapter. Here are some references: [1], [4].

REFERENCES

[1] J. S. Kilby, "Invention of the Integrated Circuit," *IEEE Trans. Electron Devices,* **ED-23,** 648 (1976).

[2] R. W. Hamming, *Numerical Methods for Scientists and Engineers*, Chapter N-1, McGraw-Hill, New York, 1962.

[3] J. Lee, K. Mayaram, and C. Hu, "A Theoretical Study of Gate/Drain Offset in LDD MOSFETs" *IEEE Electron Device Lett.,* **EDL-7**(3). 152 (1986).

[4] A. Berenbaum, B. W. Colbry, D.R. Ditzel, R. D Freeman, and K.J. O'Connor, "A Pipelined 32b Microprocessor with 13 kb of Cache Memory," it Int. Solid State Circuit Conf., Dig. Tech. Pap., p. 34 (1987).

CHAPTER 6

DEFINING THE GRAMMAR OF YOUR NETWORK

CHAPTER 7

TESTING WITH NEW SAMPLES

Corresponds to the Recognition chapter (Moreau ch. 7)

PART II

DATA VISUALIZATION

PART III

ERROR HANDLING AND GENERAL TIPS

APPENDIX A
ERROR HANDLING

This is an appendix with a title.

$$\alpha\beta\Gamma\Delta \tag{A.1}$$

Figure A.1 This is an appendix figure caption.

Table A.1 Appendix table caption

Alpha	Beta	Gamma	Delta
α	β	Γ	Δ

APPENDIX B

SOFTWARE USED

Just list all software used and why we used it

1. Audacity
2. HTK –¿ Maybe even list each of the things we used under HTK & why, i.e. HLab for labeling, HParse for whatever
3. was there anything else?

APPENDIX C

REFERENCES

REFERENCES

[1] Random People, "Hidden Markov Model,"(2014).

[2] R. W. Hamming, *Numerical Methods for Scientists and Engineers*, Chapter N-1, McGraw-Hill, New York, 1962.

[3] J. Lee, K. Mayaram, and C. Hu, "A Theoretical Study of Gate/Drain Offset in LDD MOSFETs" *IEEE Electron Device Lett.,* **EDL-7**(3). 152 (1986).

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