Multi-task Convolution Neural Networks for the CHIPS Experiment

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Abstract

LHCb is a -physics detector experiment which will take data at the 14 TeV LHC accelerator at CERN from 2007 onward...

Declaration

This dissertation is the result of my own work, except where explicit reference is made to the work of others, and has not been submitted for another qualification to this or any other university. This dissertation does not exceed the word limit for the respective Degree Committee.

Andy Buckley

Acknowledgements

Of the many people who deserve thanks, some are particularly prominent, such as my supervisor…

Preface

This thesis describes my research on various aspects of the LHCb particle physics program, centred around the LHCb detector and LHC accelerator at CERN in Geneva.

For this example, I'll just mention Chapter 3 and Chapter 2.

Contents

"Writing in English is the most ingenious torture ever devised for sins committed in previous lives."

— James Joyce

Chapter 1.

Introduction

blah blah blah

Chapter 2.

Neutrino oscillations: theoretical background and current status

blah blah blah

Chapter 3.

The CHIPS R&D Project

blah blah blah

Chapter 4.

Data acquisition for CHIPS

blah blah blah

Chapter 5.

A convolutional neural network for CHIPS

blah blah blah

Chapter 6.

Detector optimisation for CHIPS

blah blah blah

Chapter 7.

Conclusion

blah blah blah

Appendix A.

Pointless extras

"Le savant n'étudie pas la nature parce que cela est utile;
il l'étudie parce qu'il y prend plaisir,
et il y prend plaisir parce qu'elle est belle."
— Henri Poincaré, 1854–1912

Appendixes (or should that be "appendices"?) make you look really clever, 'cos it's like you had more clever stuff to say than could be fitted into the main bit of your thesis. Yeah. So everyone should have at least three of them…

A.1. Like, duh

Padding? What do you mean?

A.2. $y = \alpha x^2$

See, maths in titles automatically goes bold where it should (and check the table of contents: it *isn't* bold there!) Check the source: nothing needs to be specified to make this work. Thanks to Donald Arsenau for the teeny hack that makes this work.

Colophon

This thesis was made in LaTeX 2_ε using the "hepthesis" class [1].

Bibliography

[1] A. Buckley, The hepthesis LaTeX class.

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