Ian Tai

Learning the Stock Market: Deep Learning and Sentiment Analysis-Based Stock Price Prediction

Computer Science Tripos – Part II

Trinity College

March 9, 2018

Proforma

Name:	**Ian Tai**
College:	**Trinity College**
Project Title:	**Learning the Stock Market: Deep Learning and Sentiment Analysis-Based Stock Price Prediction**
Examination:	**Computer Science Tripos – Part II, July 2018**
Word Count:	
Project Originator:	Ian Tai
Supervisors:	Dr Sean Holden
	Prof Stephen Satchell

Original Aims of the Project

To write a demonstration dissertation[2] using LaTeX to save student's time when writing their own dissertations. The dissertation should illustrate how to use the more common LaTeX constructs. It should include pictures and diagrams to show how these can be incorporated into the dissertation. It should contain the entire LaTeX source of the dissertation and the makefile. It should explain how to construct an MSDOS disk of the dissertation in Postscript format that can be used by the book shop for printing, and, finally, it should have the prescribed layout and format of a diploma dissertation.

Work Completed

All that has been completed appears in this dissertation.

Special Difficulties

Learning how to incorporate encapulated postscript into a LaTeX document on both Ubuntu Linux and OS X.

[1]This word count was computed by `detex diss.tex | tr -cd '0-9A-Za-z \n' | wc -w`

[2]A normal footnote without the complication of being in a table.

Declaration

I, Ian Tai of Trinity College, being a candidate for Part II of the Computer Science Tripos, hereby declare that this dissertation and the work described in it are my own work, unaided except as may be specified below, and that the dissertation does not contain material that has already been used to any substantial extent for a comparable purpose.

Signed Ian Tai

Date March 9, 2018

Contents

List of Figures

Acknowledgements

This document owes much to an earlier version written by Simon Moore [**?**]. His help, encouragement and advice was greatly appreciated.

Chapter 1

Introduction

1.1 Motivation & Aims

Chapter 2

Preparation

This chapter is empty!

Chapter 3

Implementation

3.1 Verbatim text

Verbatim text can be included using `\begin{verbatim}` and `\end{verbatim}`. I normally use a slightly smaller font and often squeeze the lines a little closer together, as in:

```
GET "libhdr"

GLOBAL { count:200; all  }

LET try(ld, row, rd) BE TEST row=all
                        THEN count := count + 1
                        ELSE { LET poss = all & ~(ld | row | rd)
                               UNTIL poss=0 DO
                               { LET p = poss & -poss
                                 poss := poss - p
                                 try(ld+p << 1, row+p, rd+p >> 1)
                               }
                             }
LET start() = VALOF
{ all := 1
  FOR i = 1 TO 12 DO
  { count := 0
    try(0, 0, 0)
    writef("Number of solutions to %i2-queens is %i5*n", i, count)
    all := 2*all + 1
  }
  RESULTIS 0
}
```

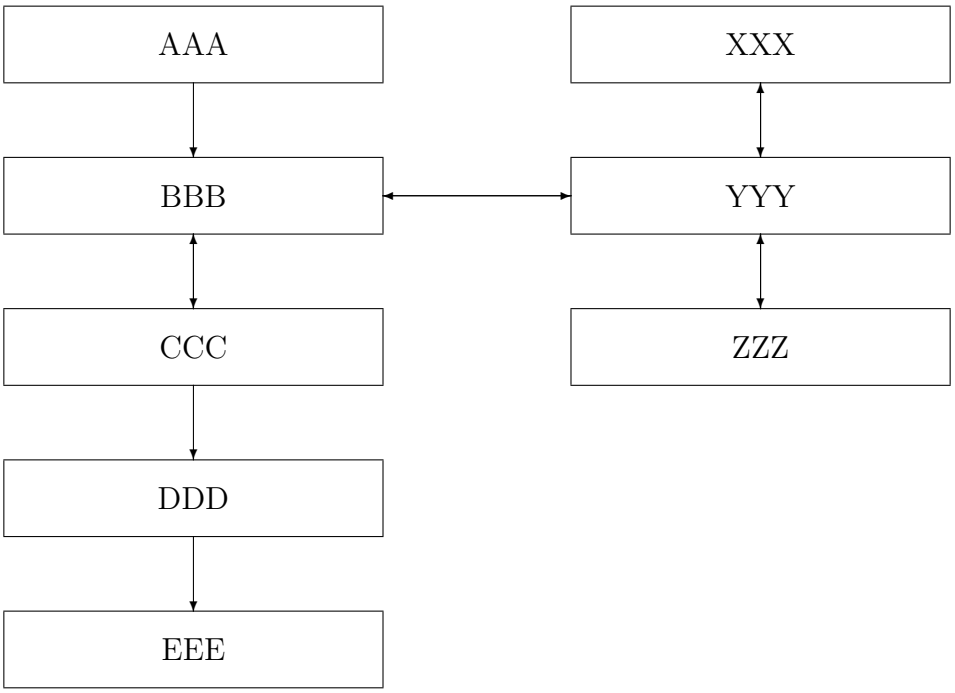

Figure 3.1: A picture composed of boxes and vectors.

3.2 Tables

Here is a simple example[1] of a table.

Left Justified	Centred	Right Justified
First	A	XXX
Second	AA	XX
Last	AAA	X

There is another example table in the proforma.

3.3 Simple diagrams

Simple diagrams can be written directly in LaTeX. For example, see figure ?? on page ?? and see figure ?? on page ??.

3.4 Adding more complicated graphics

The use of LaTeX format can be tedious and it is often better to use encapsulated postscript (EPS) or PDF to represent complicated graphics. This is my recommended way of drawing

[1] A footnote

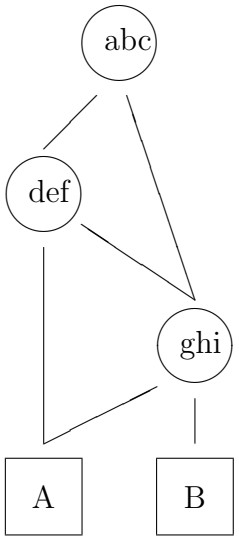

Figure 3.2: A diagram composed of circles, lines and boxes.

all diagrams.

Figure 3.3: Example figure where a picture can be pasted in

Chapter 4

Evaluation

4.1 Printing and binding

Use a "duplex" laser printer that can print on both sides to print two copies of your dissertation. Then bind them, for example using the comb binder in the Computer Laboratory Library.

4.2 Further information

See the Unix Tools notes at

`http://www.cl.cam.ac.uk/teaching/current-1/UnixTools/materials.html`

Chapter 5

Conclusion

I hope that this rough guide to writing a dissertation is LaTeX has been helpful and saved you time.

Appendix A

Latex source

Appendix B

Project Proposal