Design Automation Renegades

Globetrotting Division

BibTeX Analytics: For Automating Reference Management and Recognizing Emerging Trends

Zhiyang Ong [1]

A document on *Python*-based BibTeX analytics
For Reference Management ...
and Emerging Trend Recognition

May 21, 2018

[1]Email correspondence to: ongz@acm.org

Abstract

This documents how the repository of the BibTeX *Analytics* project is organized, and its software architecture. It also describes the future goals of the project for using a data analytics approach to recognize emerging trends in research, especially emerging research trends in electrical and computer engineering, computer science, and other fields, such as medicine, agriculture, and environmental science.

Insert abstract here.

More stuff to be included.

Revision History

Revision History:

1. Version 0.1, May 21, 2018. Initial copy of the report.
2.

Contents

Chapter 1

Text

There are a significant amount of references for helping people to learn LaTeX [1–29] and related information/technologies.

In this chapter, I will provide some templates for referencing, templates for BibTeX entries, indicate some common LaTeX symbols, usage of colors in LaTeX, and miscellaneous details.

Random macros from my LaTeX-specific IDE (or text editor):

1. \\ \rule{6in}{.1pt}
2. emailid@domain.com
3. Begin-end constructs (i.e., \begin and \end) for:
   (a) quotation
   (b) quote
   (c) verbatim
   (d) verse
4. Types of headings:
   (a) \chapter{}
   (b) \paragraph{}
   (c) \subparagraph{}
   (d) \section{}
   (e) \subsection{}
   (f) \subsubsection{}
5. To add an entry into the "Table of Contents" without it being numbered, try the following:
   (a) \addcontentsline{toc}{section}{BLAH}
   (b) \section*{BLAH}
6. Insert/import content from another file: \input{RELATIVE PATHNAME}
7. Import LaTeX packages: \usepackage{}
8. \footnote{}
9. \marginpar{}
10. $\mathcal{C}$
11. C: Caligraphy style font.
12. This is good.: Underline text.
13. `This is a statement.` TypeWriter.
14. This is a statement. Sans Serif font.

15. *This is a statement.* Slanted font.
16. This is a statement.
17. Types of labels:
    (a) "chp:" for chapter
    (b) "sec:" for section
    (c) "ssec:" for subsection
    (d) "sssec:" for subsubsection
    (e) "fig:" for figure
    (f) "tab:" for table
    (g) "eqn:" for equation
    (h) "lst:" for code listing
    (i) "defn:" for definition
    (j) "thrm:" for theorem
    (k) "lem:" for lemma
    (l) "crly:" for corollary
    (m) "prop:" for proposition
    (n) "prf:" for proof
    (o) "eg:" for example
    (p) "rem:" for remark

An enumeration of items:

1. Quite sparse enumeration:
    (a) Sparse enumeration:
        i. Very sparse enumeration:
            A. Very, very sparse list:
                - Blah
2.
3.
4. Inserting a horizontal line beneath this item in the list.

5.
6.

List of items:

- Blah

Description of items:

Key Sparse description:

key Another entry

Chapter 2

Text

There are a significant amount of references for helping people to learn LaTeX [1–29] and related information/technologies.

In this chapter, I will provide some templates for referencing, templates for BibTeX entries, indicate some common LaTeX symbols, usage of colors in LaTeX, and miscellaneous details.

Random macros from my LaTeX-specific IDE (or text editor):

1. \\ \rule{6in}{.1pt}
2. emailid@domain.com
3. Begin-end constructs (i.e., \begin and \end) for:
   (a) quotation
   (b) quote
   (c) verbatim
   (d) verse
4. Types of headings:
   (a) \chapter{}
   (b) \paragraph{}
   (c) \subparagraph{}
   (d) \section{}
   (e) \subsection{}
   (f) \subsubsection{}
5. To add an entry into the "Table of Contents" without it being numbered, try the following:
   (a) \addcontentsline{toc}{section}{BLAH}
   (b) \section*{BLAH}
6. Insert/import content from another file: \input{RELATIVE PATHNAME}
7. Import LaTeX packages: \usepackage{}
8. \footnote{}
9. \marginpar{}
10. $\mathcal{C}$
11. C: Caligraphy style font.
12. This is good.: Underline text.
13. `This is a statement.` TypeWriter.
14. This is a statement. Sans Serif font.

15. *This is a statement.* Slanted font.
16. This is a statement.
17. Types of labels:
    (a) "chp:" for chapter
    (b) "sec:" for section
    (c) "ssec:" for subsection
    (d) "sssec:" for subsubsection
    (e) "fig:" for figure
    (f) "tab:" for table
    (g) "eqn:" for equation
    (h) "lst:" for code listing
    (i) "defn:" for definition
    (j) "thrm:" for theorem
    (k) "lem:" for lemma
    (l) "crly:" for corollary
    (m) "prop:" for proposition
    (n) "prf:" for proof
    (o) "eg:" for example
    (p) "rem:" for remark

An enumeration of items:

1. Quite sparse enumeration:
    (a) Sparse enumeration:
        i. Very sparse enumeration:
            A. Very, very sparse list:
                - Blah
2.
3.
4. Inserting a horizontal line beneath this item in the list.

5.
6.

List of items:

- Blah

Description of items:

Key Sparse description:
key Another entry

Bibliography

[1] Karl Berry and David Walden. TEX People: Interviews from the world of TEX. TEX Users Group, Portland, OR, 2009.

[2] Donald Bindner and Martin Erickson. A Student's Guide to the Study, Practice, and Tools of Modern Mathematics. Discrete Mathematics and Its Applications. CRC Press, Boca Raton, FL, 2011.

[3] Thomas H. Cormen. Using the `clrscode3e` package in LATEX 2_ε. Avaliable on Dartmouth College: Department of Computer Science: Prof. Thomas H. Cormen's web page: The `clrscode` and `clrscode3e` packages for LATEX 2_ε at: http://www.cs.dartmouth.edu/~thc/clrscode/; September 18, 2010 was the last accessed date, January 27 2010.

[4] Antoni Diller. LATEX Line by Line: Tips and Techniques for Document Processing. John Wiley & Sons, Chichester, West Sussex, England, U.K., second edition, 1999.

[5] Michel Goossens, Frank Mittelbach, Sebastian Rahtz, Denis Roegel, and Herbert Voβ. The LATEX Graphics Companion. Addison-Wesley Series on Tools and Techniques for Computer Typesetting. Addison-Wesley, Reading, MA, second edition, 2007.

[6] Michel Goossens, Sebastian Rahtz, Eitan M. Gurari, Ross Moore, and Robert S. Sutor. The LATEX Web Companion: Integrating TEX, HTML, and XML. Addison-Wesley Series on Tools and Techniques for Computer Typesetting. Addison Wesley Longman Limited, Reading, MA, 1999.

[7] Michel Goossens, Sebastian Rahtz, and Frank Mittelbach. The LATEX Graphics Companion: Illustrating documents with TEX and PostScript. Addison-Wesley Series on Tools and Techniques for Computer Typesetting. Addison-Wesley, Reading, MA, 1997.

[8] George Grätzer. More Math Into LATEX. Springer Science+Business Media, LCC, New York, NY, fourth edition, 2007.

[9] David F. Griffiths and Desmond J. Higham. Learning LATEX. Society for Industrial and Applied Mathematics, Philadelphia, PA, 1997.

[10] Wilhelmiina Hämäläinen. Scientific writing for computer science students. Technical report, University of Joensuu, Joensuu, Finland, September 20 2006.

[11] Yannis Haralambous. Fonts & Encodings: From Unicode to Advanced Typography and Everything in Between. O'Reilly Media, Sebastopol, CA, 2007.

[12] Nicholas J. Higham. Handbook of Writing for the Mathematical Sciences. Society for Industrial and Applied Mathematics, Philadelphia, PA, second edition, 1998.

[13] Alan Hoenig. TEX Unbound: LATEX & TEX Strategies for Fonts, Graphics, & More. Oxford University Press, New York, NY, 1998.

[14] Donald E. Knuth. Digital Typography. Center for the Study of Language and Information – Lecture Notes. The University of Chicago Press, Chicago, IL, 1999.

[15] Helmut Kopka and Patrick W. Daly. Guide to LATEX. Addison-Wesley Series on Tools and Techniques for Computer Typesetting. Addison-Wesley, Boston, MA, fourth edition, 2004.

[16] Sandeep Koranne. Handbook of Open Source Tools. Springer Science+Business Media, LCC, New York, NY, 2011.

[17] Stefan Kottwitz. LATEX Beginner's Guide: Create high-quality and professional-looking texts, articles, and books for business and science using LATEX. Packt Publishing, Birmingham, West Midlands, England, U.K., 2011.

[18] Steven G. Krantz. Handbook of Typography for the Mathematical Sciences. Chapman & Hall/CRC, Boca Raton, FL, 2001.

[19] E. Krishnan. LATEX Tutorials: A Primer. Indian TeX Users Group, Trivandrum, India, September 2003.

[20] Leslie Lamport. LATEX: A Document Preparation System. Addison-Wesley, Reading, MA, second edition, 1994.

[21] Frank Mittelbach, Michel Goossens, Johannes Braams, David Carlisle, and Chris Rowley. The LATEX Companion. Addison-Wesley Series on Tools and Techniques for Computer Typesetting. Addison-Wesley, Boston, MA, second edition, 2004.

[22] Scott Pakin. The comprehensive LATEX symbol list. Available online at: http://mirror.ctan.org/info/symbols/comprehensive/symbols-a4.pdf; July 1, 2011 was the last accessed date, January 3 2008.

[23] Eric S. Raymond. The Art of UNIX Programming. Addison-Wesley Professional Computing Series. Pearson Education, Boston, MA, 2004.

[24] Martin Scharrer. The tikz-timing package: A LATEX package for timing diagrams. Available online at: http://www-inst.eecs.berkeley.edu/~cs150/fa13/resources/tikz-timing.pdf and http://latex.scharrer-online.de/tikz-timing; February 8, 2014 was the last accessed date, January 9 2011.

[25] Apostolos Syropoulos, Antonis Tsolomitis, and Nick Sofroniou. Digital Typography Using LATEX. Springer Professional Computing. Springer-Verlag New York, New York, NY, 2003.

[26] TeX Users Group. Proceedings of the International Conference on TeX, XML, and Digital Typography: Held Jointly with the 25^{th} Annual Meeting of the TeX Users Group, TUG 2004, volume 3130 of Lecture Notes in Computer Science, Xanthi, Greece, August 30-September 3 2004. Springer-Verlag Berlin Heidelberg.

[27] UIT Cambridge. LatexConditionals. Available online at: http://www.uit.co.uk/ForAuth/LatexConditionals; March 20, 2013 was the last accessed date, January 17 2011.

[28] M. R. C. van Dongen. LaTeX and Friends. X.media.publishing. Springer-Verlag Berlin Heidelberg, Heidelberg, Germany, 2012.

[29] Herbert Voss. PSTricks: Graphics and PostScript for TeX and LaTeX. UIT Cambridge, Cambridge, U.K., 2011.