

Fast Computation of the Kernel of a Tree and Applications to Semi-Supervised Learning

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This report is submitted as part requirement for the MSc Degreee in Machine Learning at University College London. It is substantially the result of my own work except where explicitly indicated in the text.

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Abstract

I've done some stuff

Acknowledgements

Some nice people

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List of Figures

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List of Algorithms

Chapter 1

Introduction and Background

Chapter 2

Implementation

Equations can be inserted either within the text as $x = \phi/2$, or preferably, as numbered equations where

$$p(\mathbf{Z}_k | \mathcal{T}_k, \mathbf{e}) = \prod_{i \in S_k} G_{z_{i,k}}[\mu_{\mathcal{T}_k(i)}, \phi_{\mathcal{T}_k(i)}], \quad (2.1)$$

and the equation still receives proper punctuation because equations are just normal parts of sentences.

You can reference the above equations like this: Equation 2.1, or (2.1) for short. You can also reference sections: Section 3.1. Notice that in the .tex file, one can precede `\ref` with a tilde (`~`). Using a tilde instead of a space forces a small space to happen there, and essentially glues the previous word to the label being referenced. This keeps a line-break from interrupting your reference like this: Equation 2.1.

One should cite papers by referring to the only author, or the only two authors together, or to just the first author if there are three or more. So one may say that we gained great wisdom from Weiss [3], have been enlightened by Tuytelaars and Van Gool [1], and are inspired by Vedula et al. [2].

Chapter 3

Evaluation

3.1 Figures

Figure 3.1, is an example of a figure with a legend.

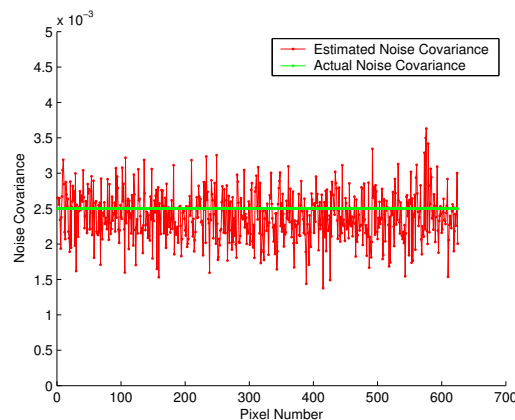


Figure 3.1: This is the figure caption. Notice the figure looks good even when magnified because it is a vector-graphic, and not rasterized.

Old and New Instructions These instructions are partly “old” because instead of .eps, we usually put pdf or png figures in our documents these days. However, they’re still useful because exporting of Matlab figures directly to pdf, when using the Student License version of Matlab, results in an undesirable watermark. So my advice is to prepare your raster images as .png’s, prepare your vector graphics as .pdf’s in Inkscape or even Office (with the MS plugin that exports to .pdf), and follow the following slightly roundabout process to get Matlab figures into .pdf form.

1. Make the figure in Matlab.
2. Do `print -depsc2` to generate an .eps.
3. Open the .eps in Ghostview (GSview) and “Convert” using the “pdfwrite” device to save a .pdf.

Chapter 4

Conclusion

Figures need not be in `.pdf` format. For example, Figure 4.1 pulls in 3 copies of a `.png` file. Also, notice that the automatic-placement of figures will try to put each figure as close as possible to the first reference in the final document, regardless of figure-placement in the `.tex`.

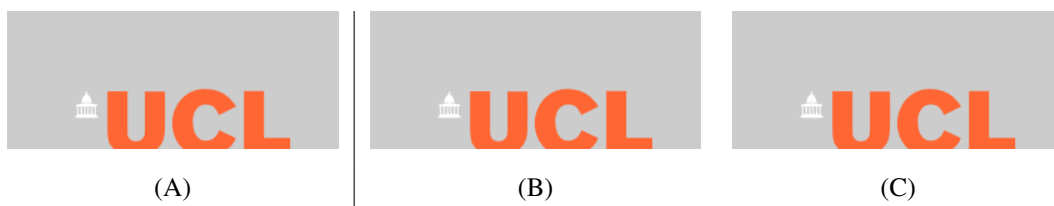


Figure 4.1: Another figure caption. These should be meaningful and somewhat self-contained.

Appendix A

Theoretical Background

Appendix B

Lisp Primer

Bibliography

- [1] T. Tuytelaars and L. Van Gool. Synchronizing video sequences. *Computer Vision and Pattern Recognition, IEEE Computer Society Conference on*, 1:762–768, 2004.
- [2] S. Vedula, S. Baker, and T. Kanade. Image-based spatio-temporal modeling and view interpolation of dynamic events. *ACM Transactions on Graphics*, 24(2):240–261, Apr. 2005.
- [3] Y. Weiss. Deriving intrinsic images from image sequences. In *ICCV*, pages 68–75, 2001.