LaTeX Document Example

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1. Intro

This file was created using LaTeX. See the source file `.tex` for the details of the source code in markup language. Lamport (1994) is a comprehensive LaTeX manual, which includes user's guide and references. You can find a good and shorter tutorials online here. Below, you will find some very simple examples that you can use as a template to write your documents.

2. Math

The examples below use math commands defined in the file `./sty/math-commands.sty`. LaTeX contains many packages with predefined math symbols that you can use. Check the references above.
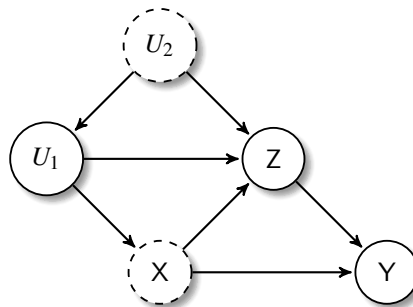
- Expectation

$$\mathbb{E}\left[Y \mid X\right] = f(\mu)$$

- Variance

$$\mathbb{V}\mathrm{ar}\left[Y \mid X\right] = \sigma_{\varepsilon}^2 = \mathbb{E}\left[(Y - \mathbb{E}\left[Y\right])^2 \mid X\right] = \int (y - \mathbb{E}\left[Y\right])^2 p(y \mid x) dy$$

3. Diagrams

To create diagrams, you can use the LaTeX package `Tikz`. Some commands to create the diagram below was defined in `./sty/math-commands.sty`. For more examples, check the files `latex-graphs.tex` and `latex-graphs.pdf`. You can find `TikZ` manual online.
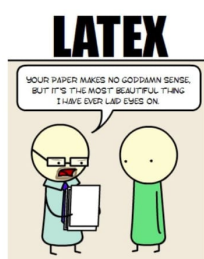
4. Figures

You can include a single figure or a grid with many subfigures. See Figure 1, which shows a single figure. Figure 2 contains two subfigures: Figures 2a and 2b. Figure 3 contains a grid with five subfigures.

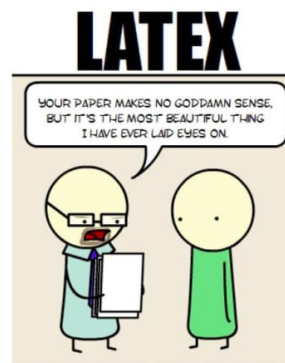Figure 1: This is a single figure about LaTeX

(a) Put your FIRST sub-caption here. This subfigure was manually rescaled using command `width=.7\linewidth` (see source .tex) to occupy .7 of its reserved space

(b) Put your SECOND sub-caption here

Figure 2: This is a Figure with two subfigures. Put your caption for the whole figure here

(a) Put your FIRST sub-caption here

(b) Put your SECOND sub-caption here

(c) Put your THIRD sub-caption here

(d) Put your FORTH sub-caption here

(e) Put your FIFTH sub-caption here

Figure 3: This is a Figure with five subfigures. Put your caption for the whole figure here.

5. Tables

References

Lamport, L. (1994). *LATEX: a document preparation system: user's guide and reference manual.* Addison-wesley.